

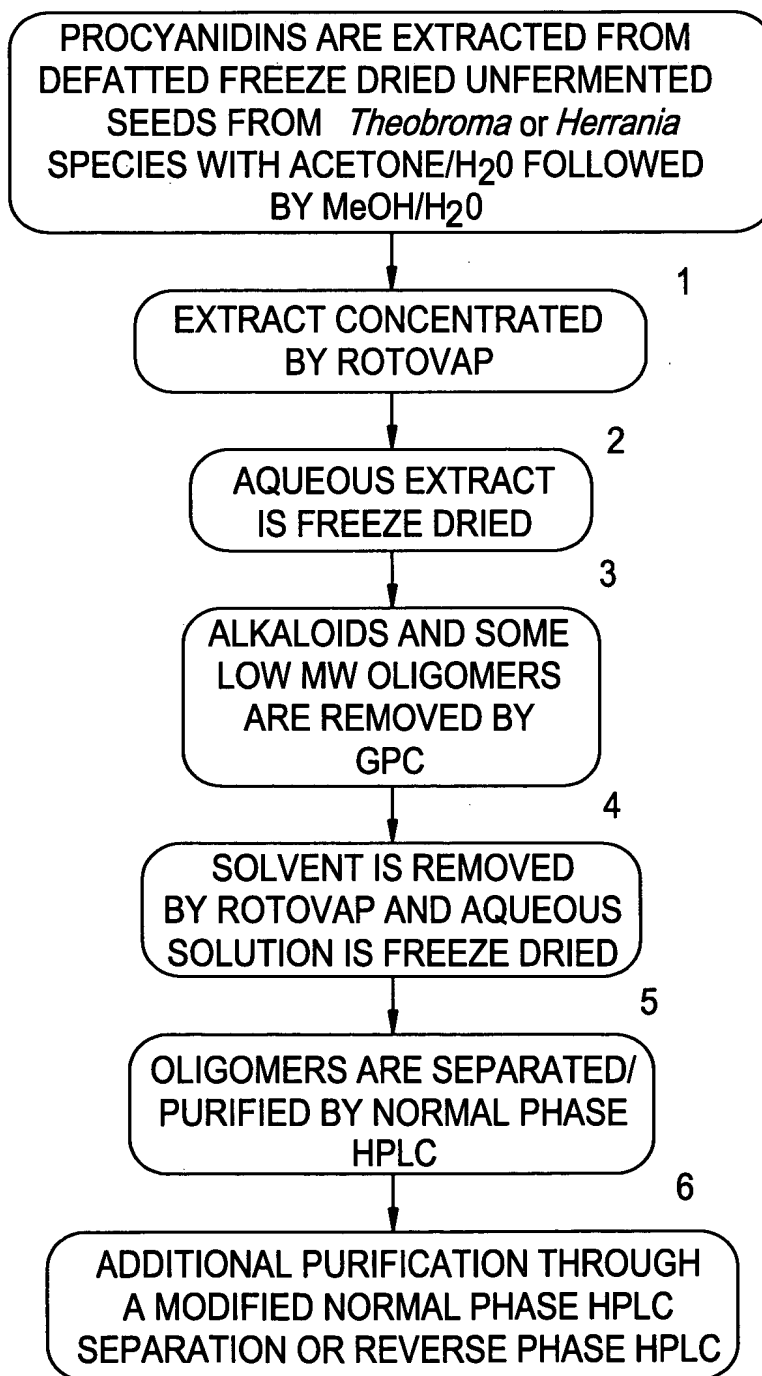


10/ 780,298

REPLACEMENT SHEET

FIG. 1

Summary of the current purification protocol



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FIG. 2A

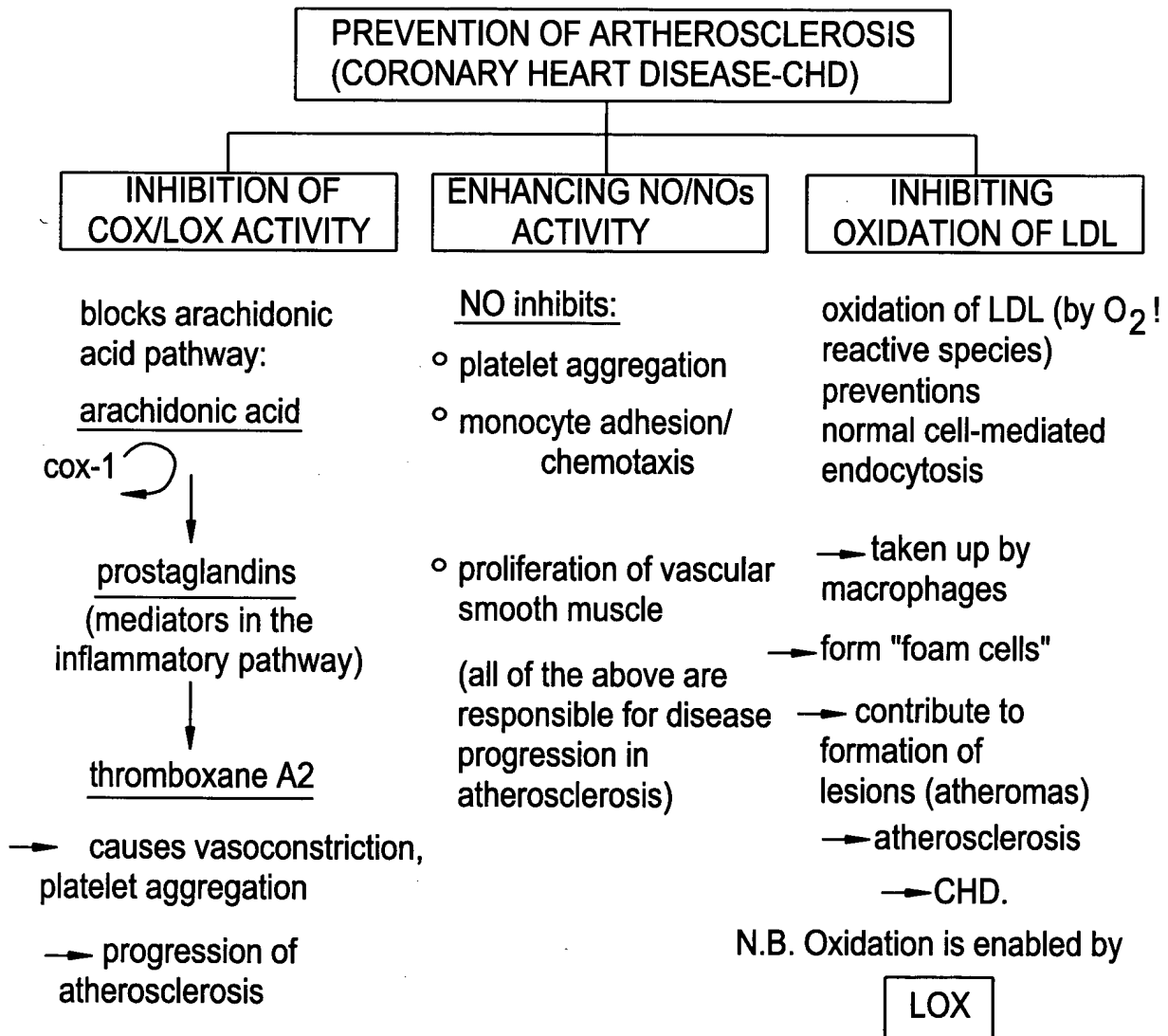
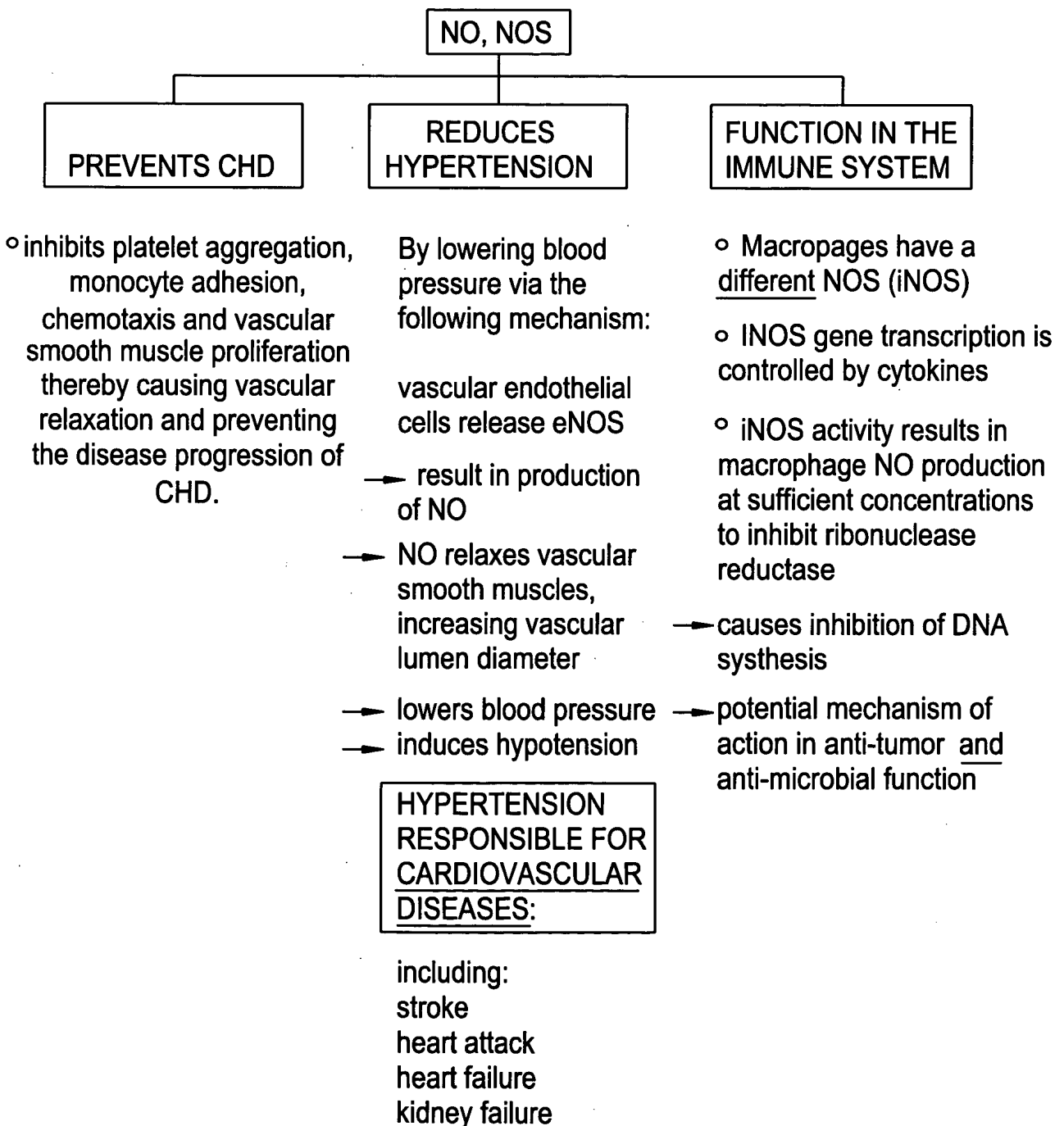


Chart showing the major contributing factors in the progression of Coronary Heart Disease (CHD) and how the activity of cocoa procyanidins contributes to the prevention of the progression of the disease state

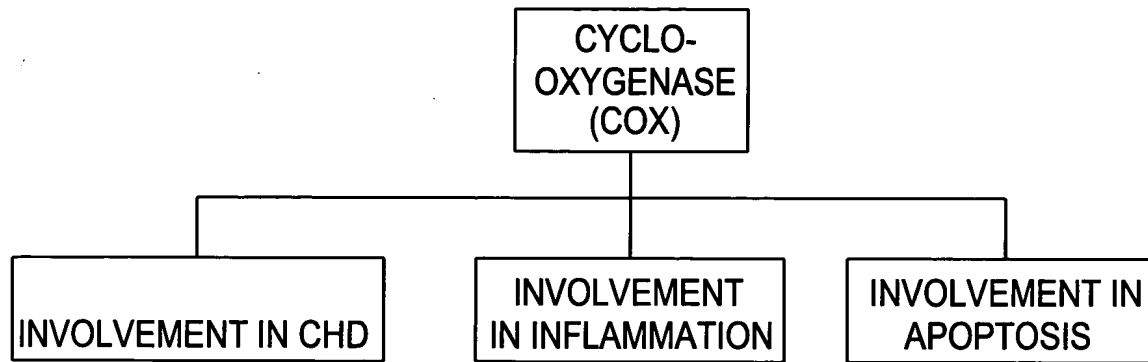
FIG. 2B

The cocoa procyanidins induce the activity of NOS and therefore the resulting production NO, thereby enhancing the health benefits mediated by the activity of nitric oxide (NO).



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FIG. 2C



COX-1 is essential in the arachidonic acid pathway which results in the production of thromboxane.

→ thromboxane and prostaglandins which promote platelet aggregation and vasoconstriction

→ resulting in progression of atherosclerosis.

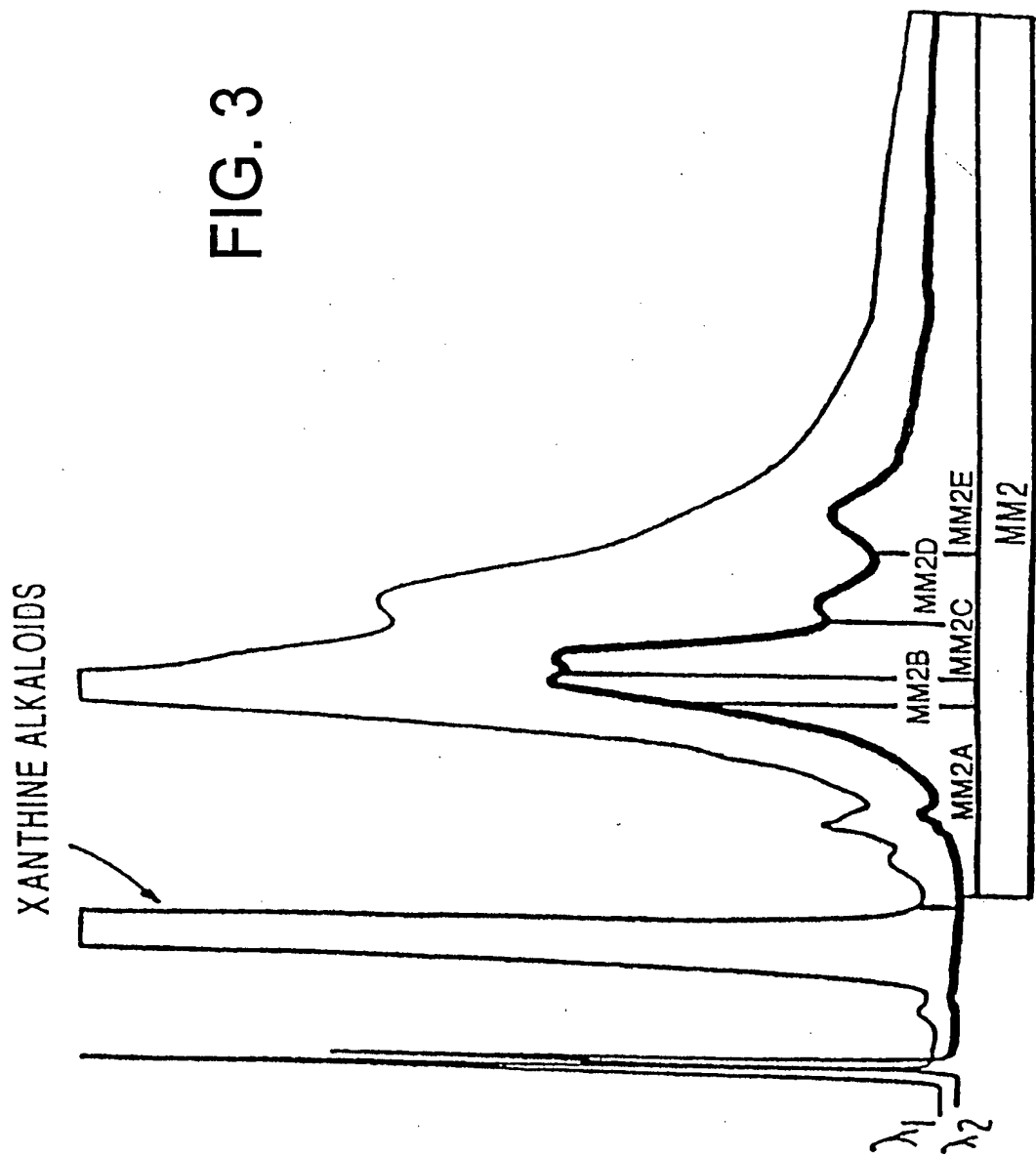
COX-1 is an essential enzyme in the inflammatory pathway, the penultimate products of which (the prostaglandins) are largely responsible for the inflammatory pathway, the results of which contribute to a variety of diseases including:

→ bowel disease, arthritis, edema, gingivitis/ peridontitis, etc.

COX-2 producing cells lines show enhanced expression of genes known to be involved in apoptosis:

→ potential putative mechanism of killing tumor cells.

The cocoa procyanidins inhibit the production of cyclo-oxygenase, thereby blocking the arachidonic acid pathway, which is responsible for the inflammatory response and the vasoconstrictive and platelet aggregating responses which contribute to the disease progression of CHD.



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FIG. 4

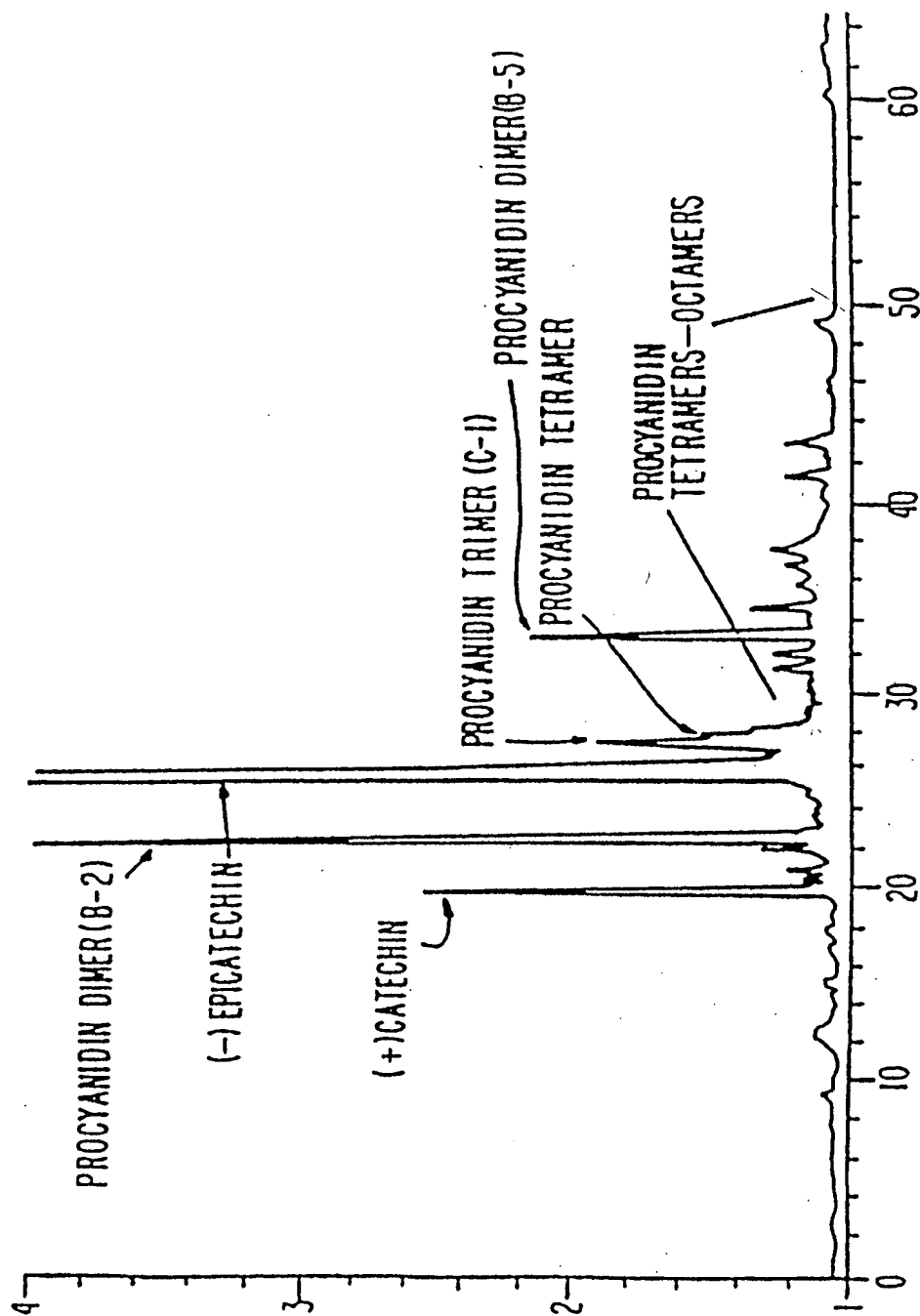


FIG. 5

DAD1 A, Sig=280, 40 of 4078/009-0401.D

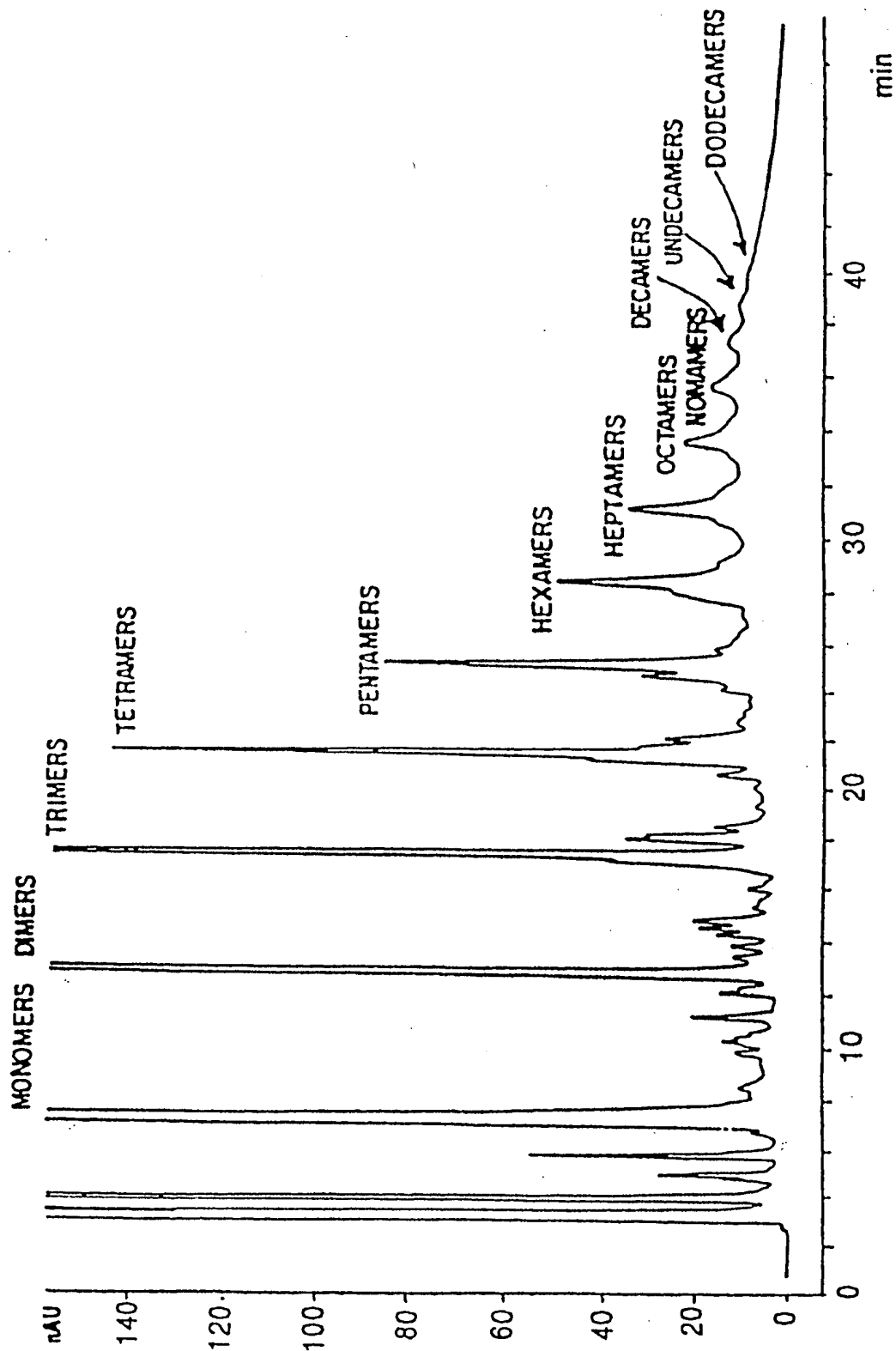
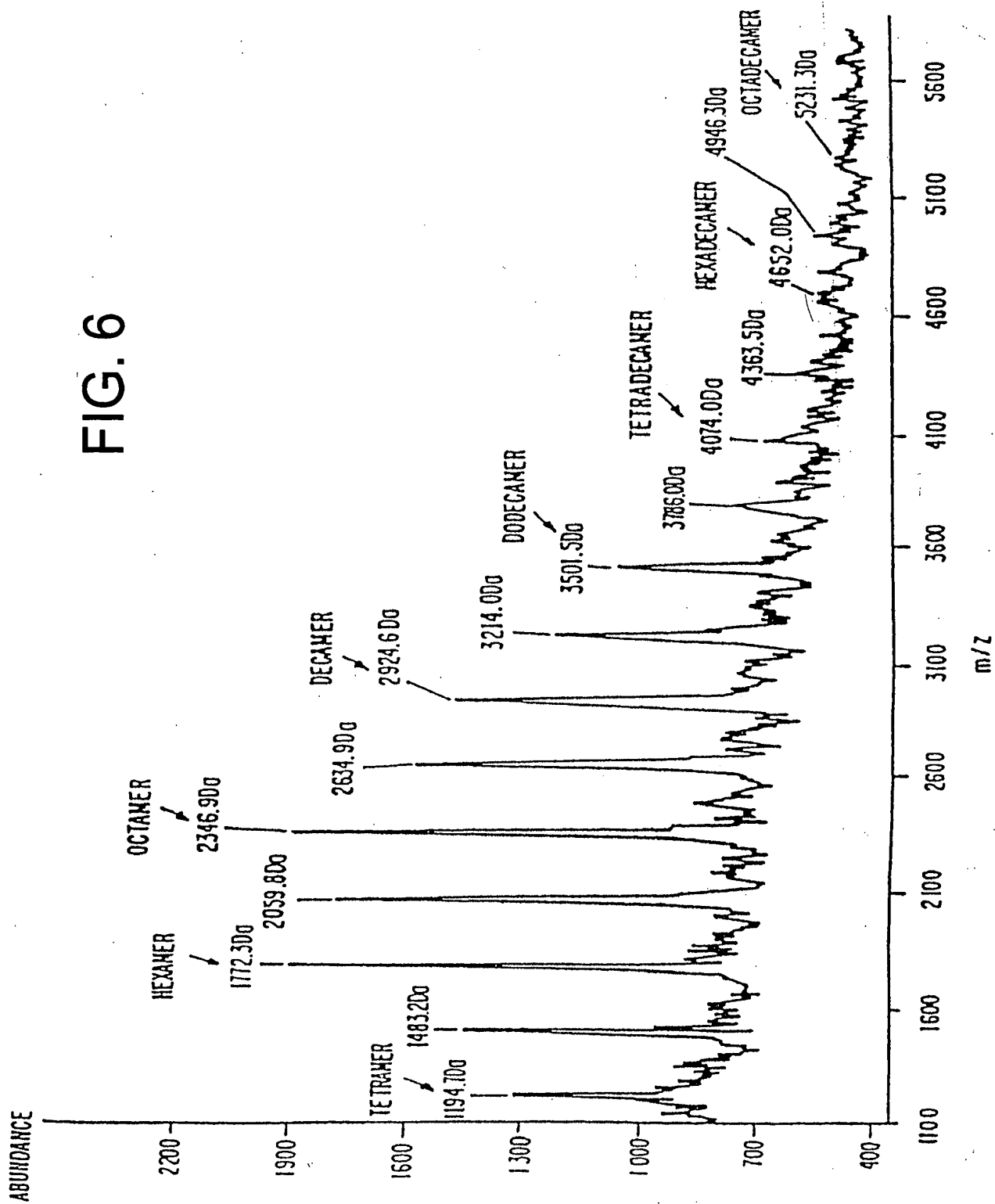


FIG. 6



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FIG. 7

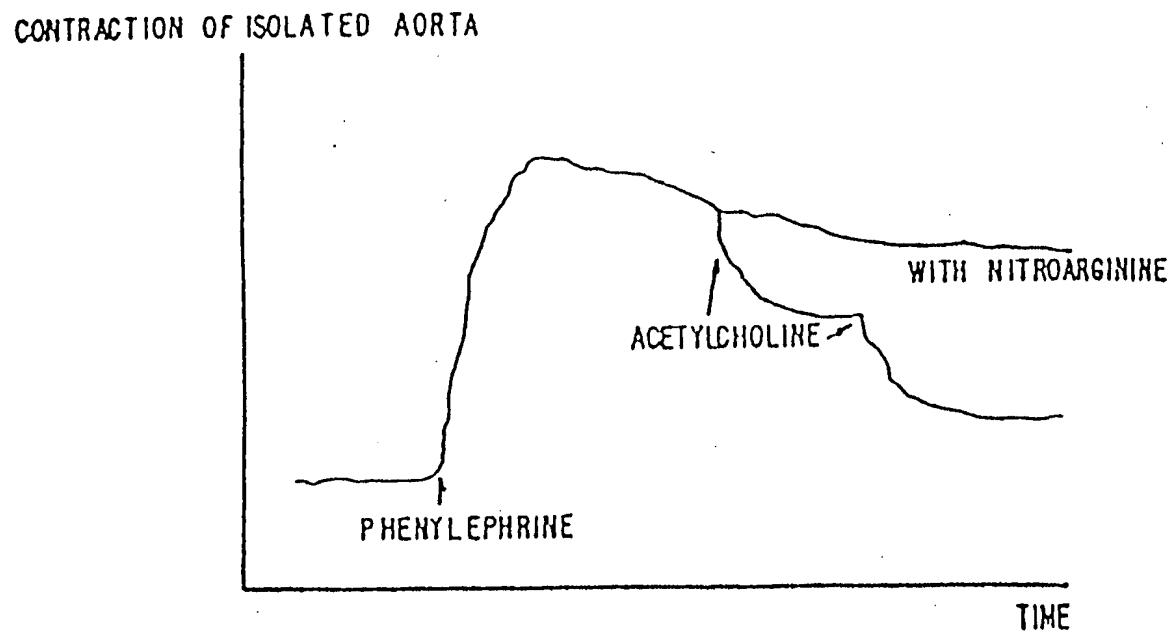


FIG. 8A

EFFECT OF COCOA PROCYANIDIN FRACTION A ON
BLOOD PRESSURE

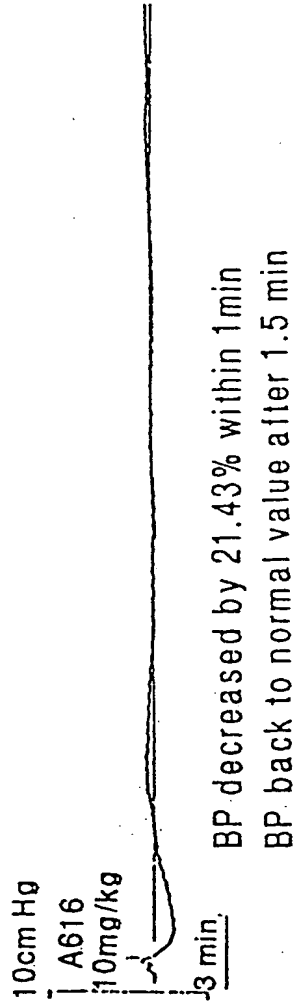
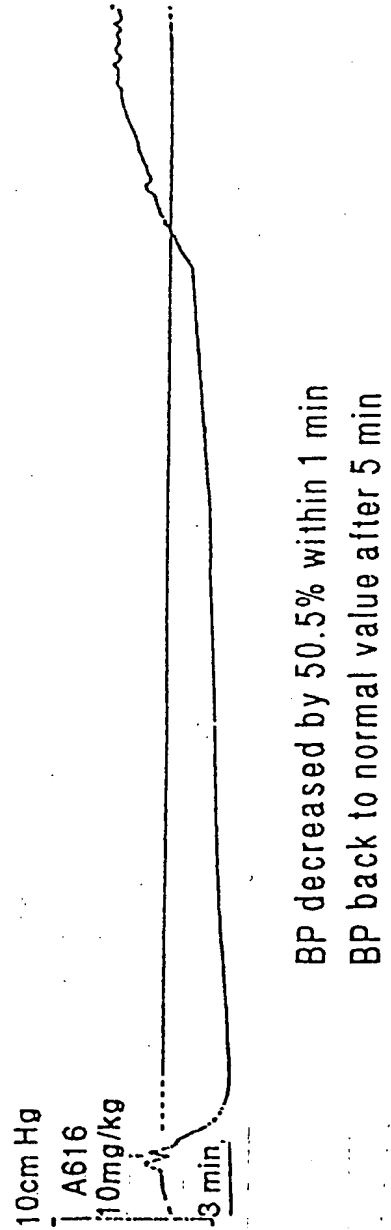


FIG. 8B

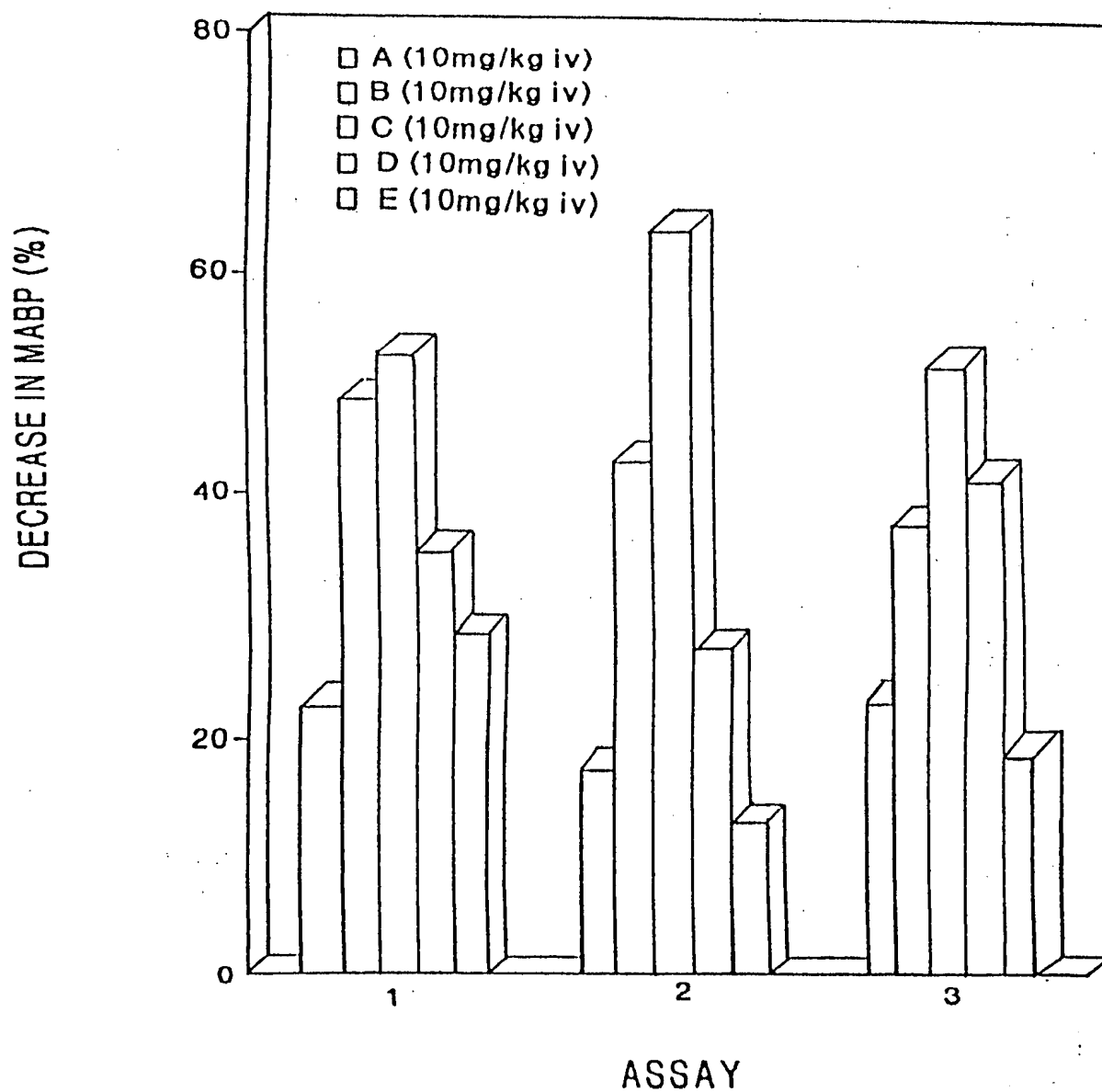
EFFECT OF COCOA PROCYANIDIN FRACTION C ON
BLOOD PRESSURE



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FIG. 9

EFFECT OF COCOA PROCYANIDIN FRACTIONS ON ARTERIAL
BLOOD PRESSURE IN ANESTHESIZED GUINEA PIGS



REPLACEMENT SHEET

FIG. 10

EFFECT OF L-NMMA ON THE ALTERATIONS OF ARTERIAL
BLOOD PRESSURE IN ANESTHESIZED GUINEA PIGS INDUCED BY
COCOA PROCYANIDIN FRACTION C

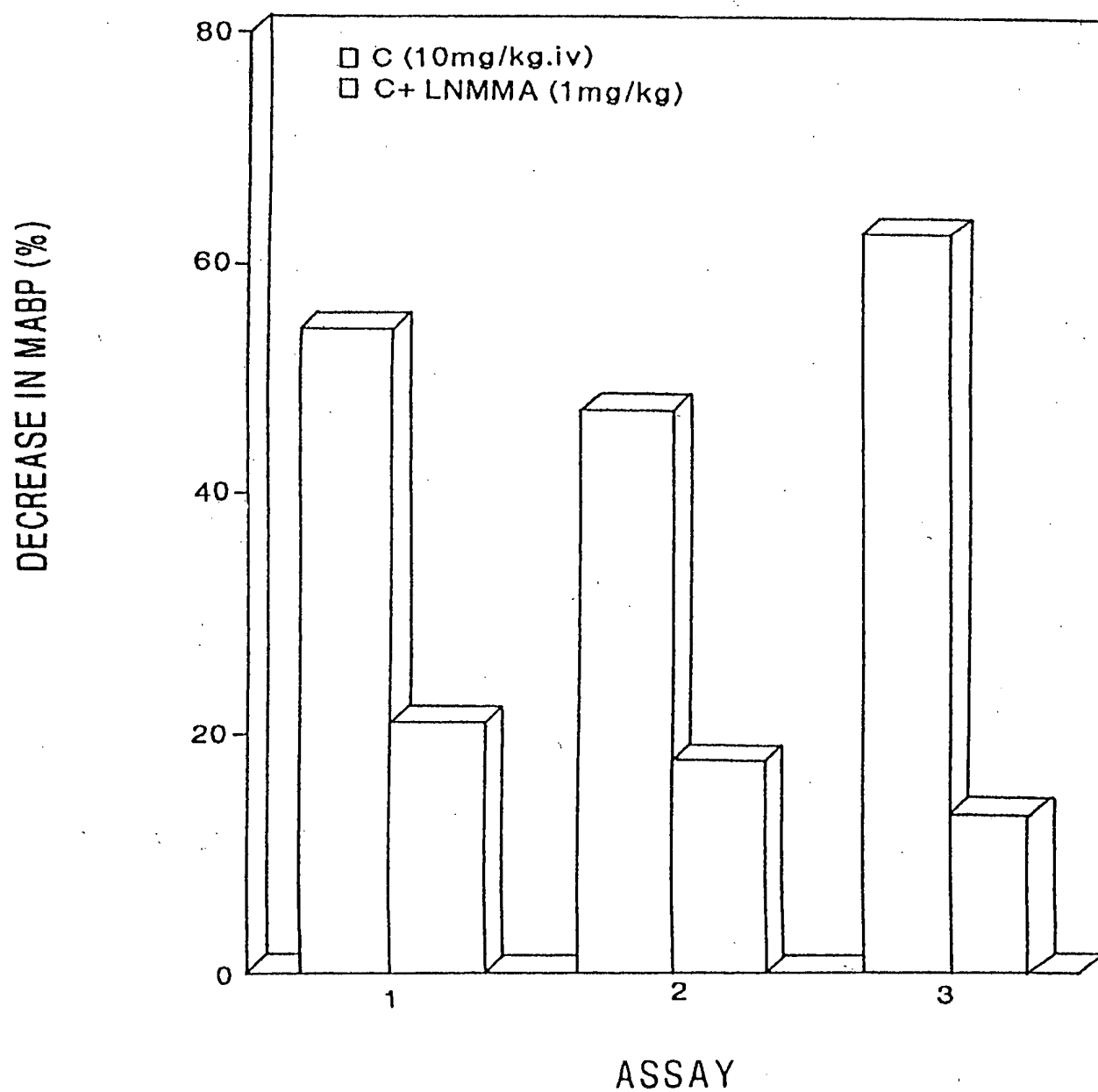
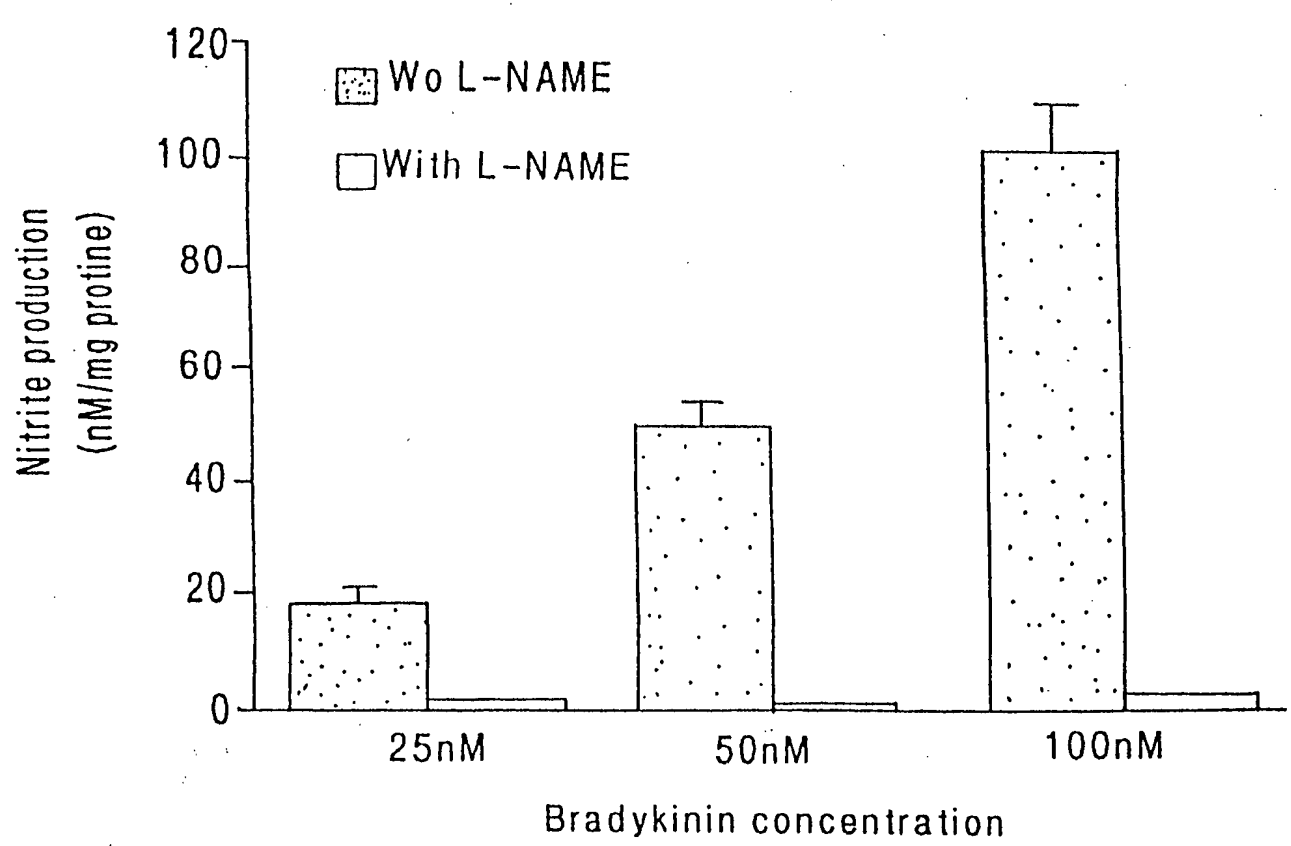


FIG. 11

EFFECT OF BRADYKININ ON NO PRODUCTION BY HUVÇC



REPLACEMENT SHEET

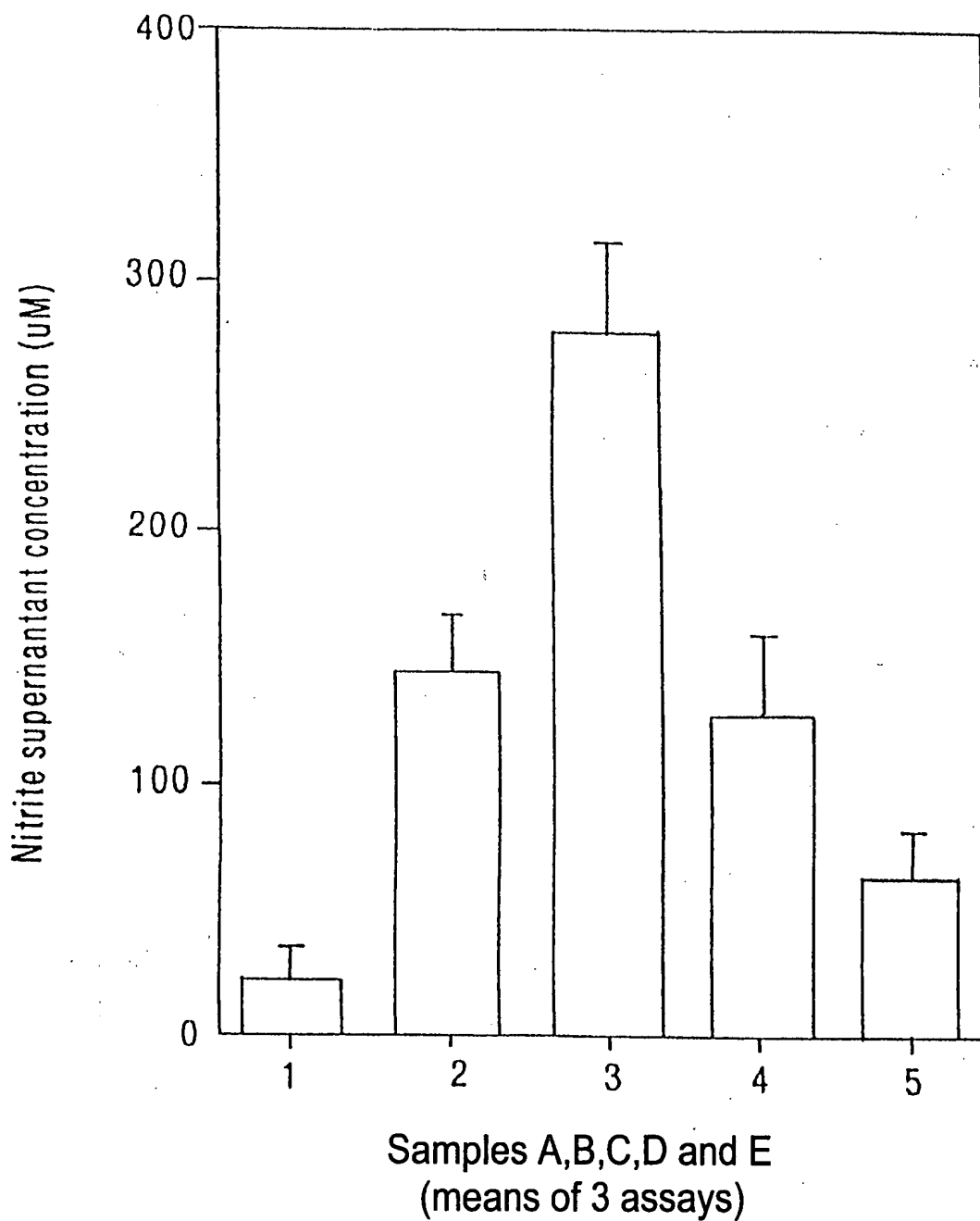
FIG. 12**EFFECT OF COCOA PROCYANIDIN FRACTIONS ON NO
PRODUCTION BY HUVEC**

FIG. 13

Figure A: Effect of Cocoa Procyanidin Fractions on Macrophage

NO Production

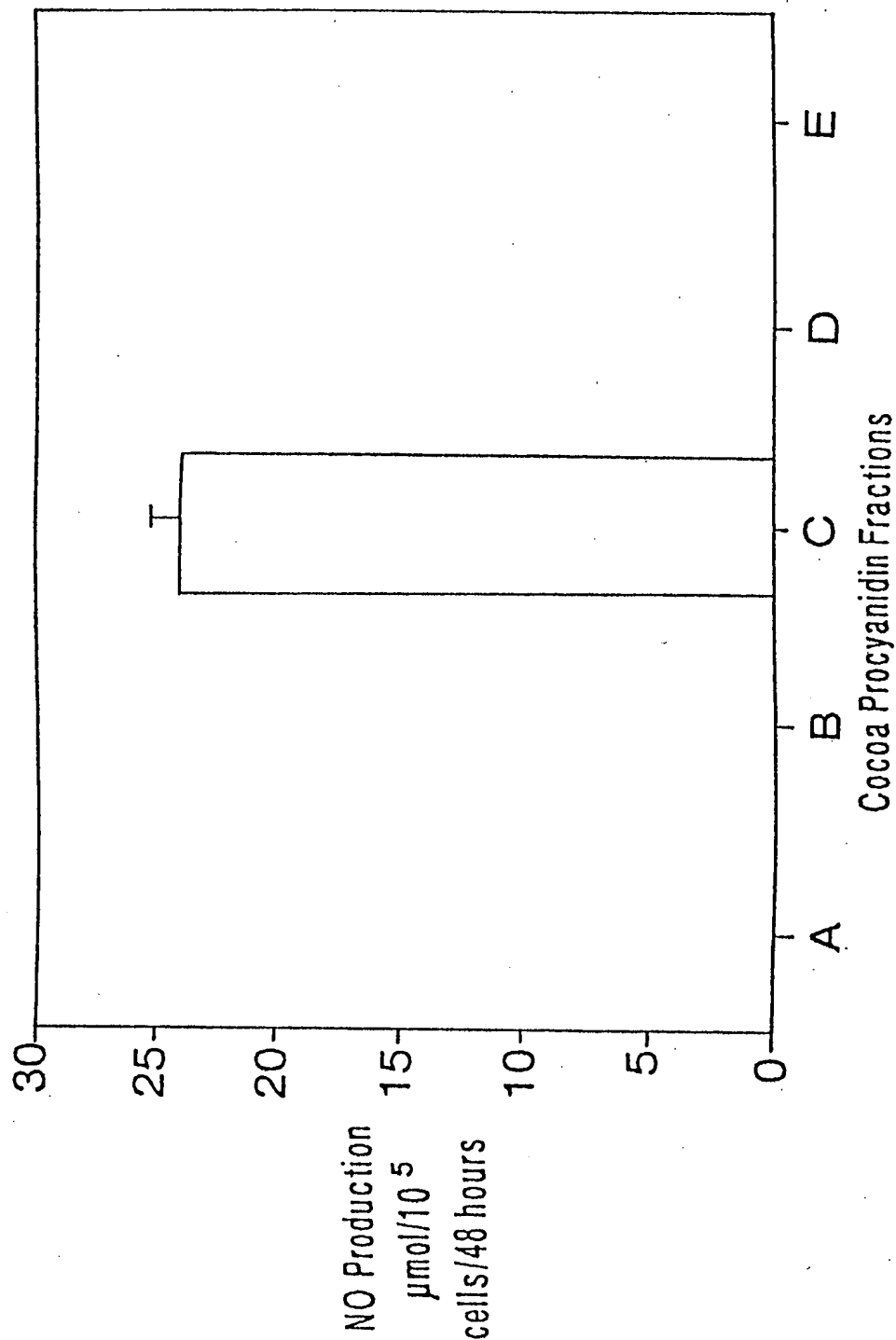


FIG. 14

Figure B: Effect of Cocoa Procyanidin Fractions on LPS Induced and γ -Interferon Primed Macrophages

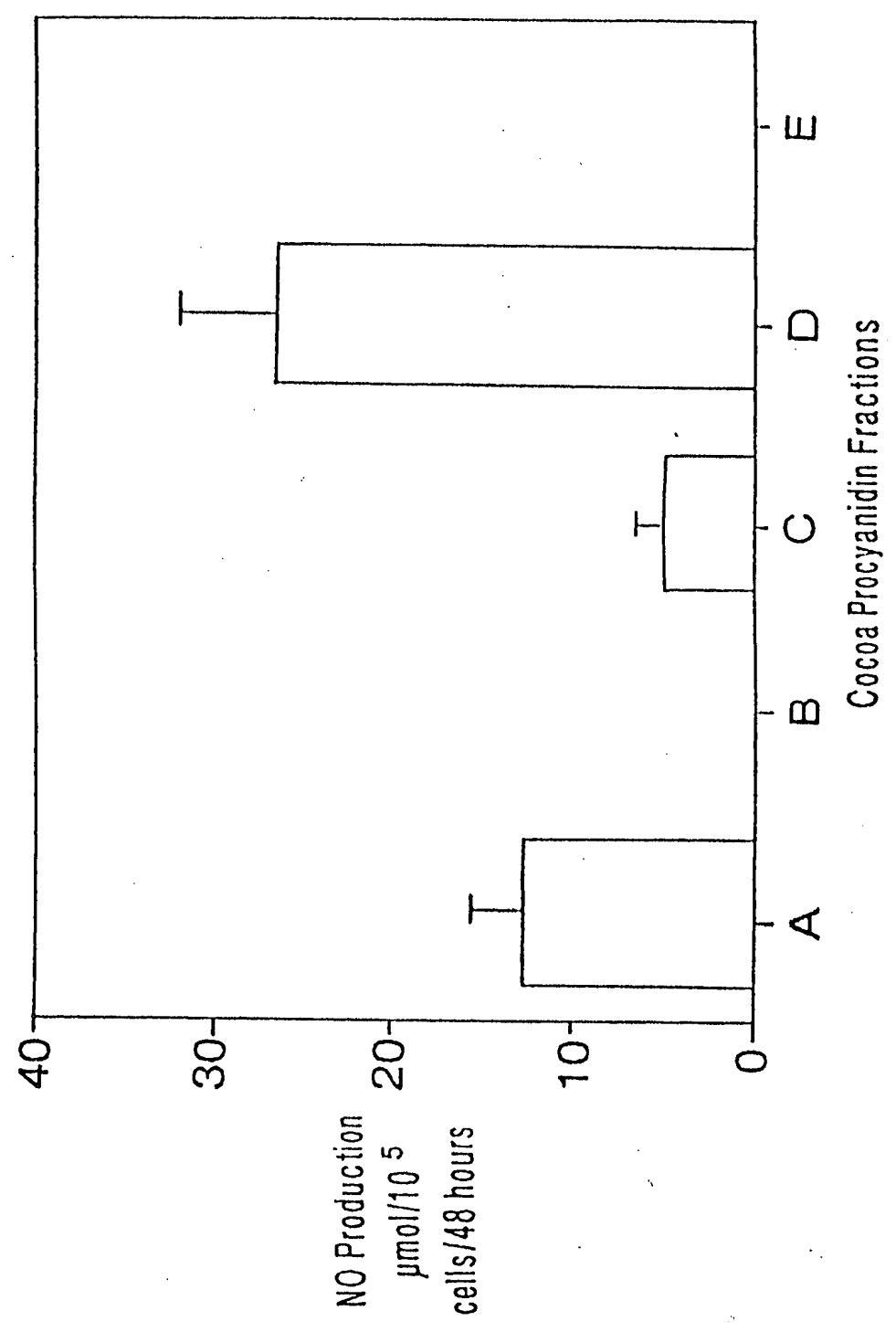


FIG. 15A

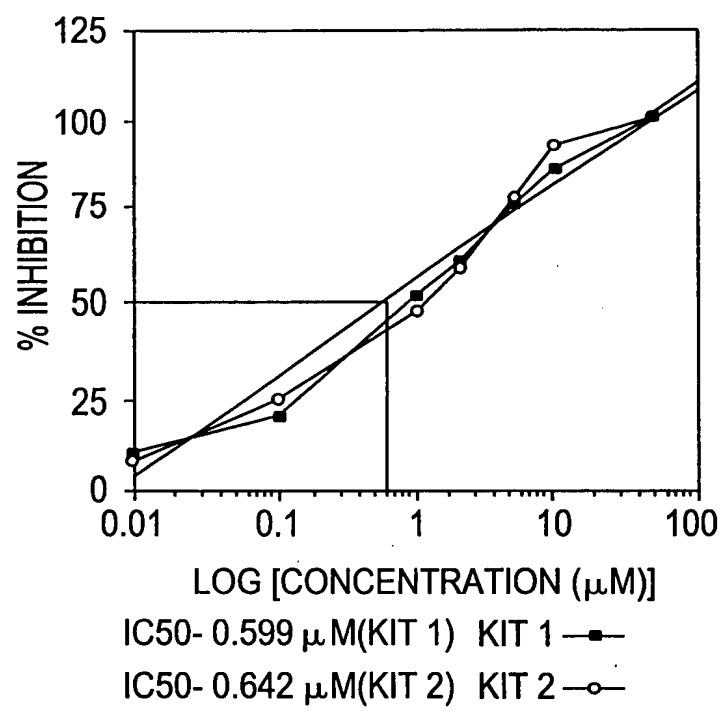


FIG. 15B

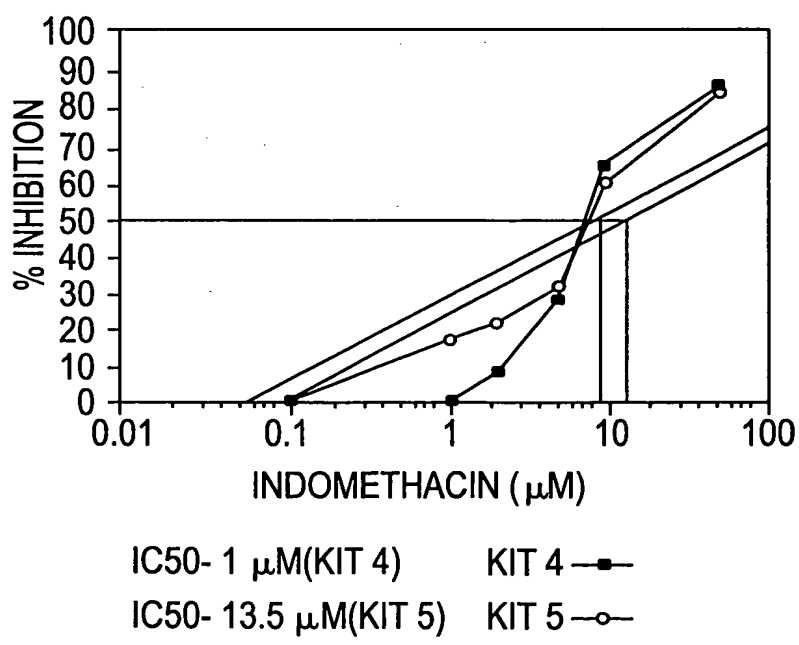
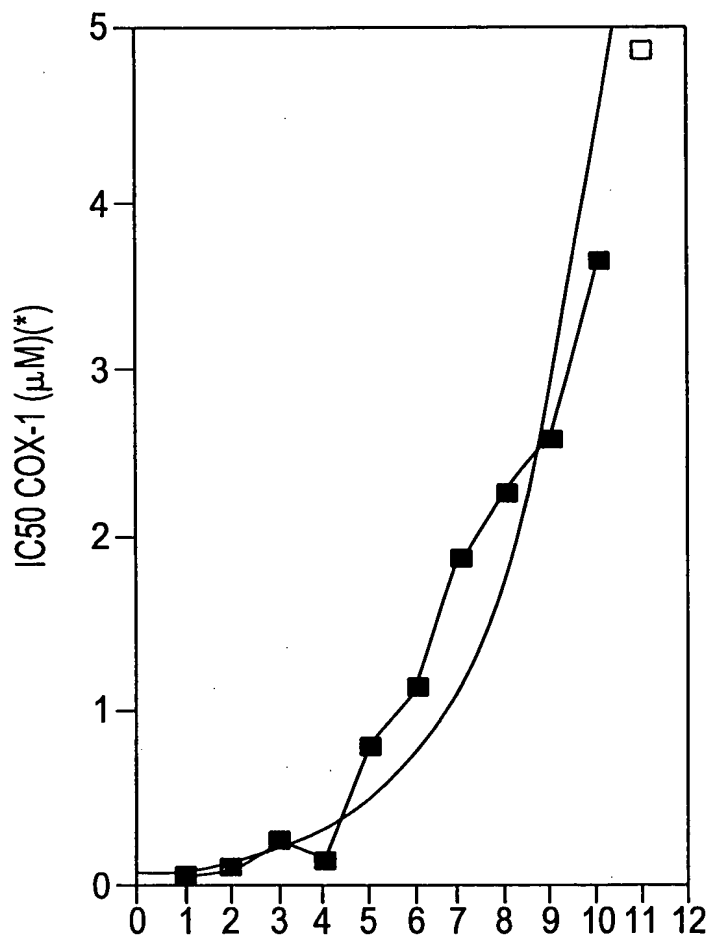


FIG. 16A



DEGREE OF POLYMERIZATION (SAMPLE #)
 (*) WITH THE EXCEPTION OF SAMPLE S11 EXPRESSED AS mg/ml

REPLACEMENT SHEET

FIG. 16B

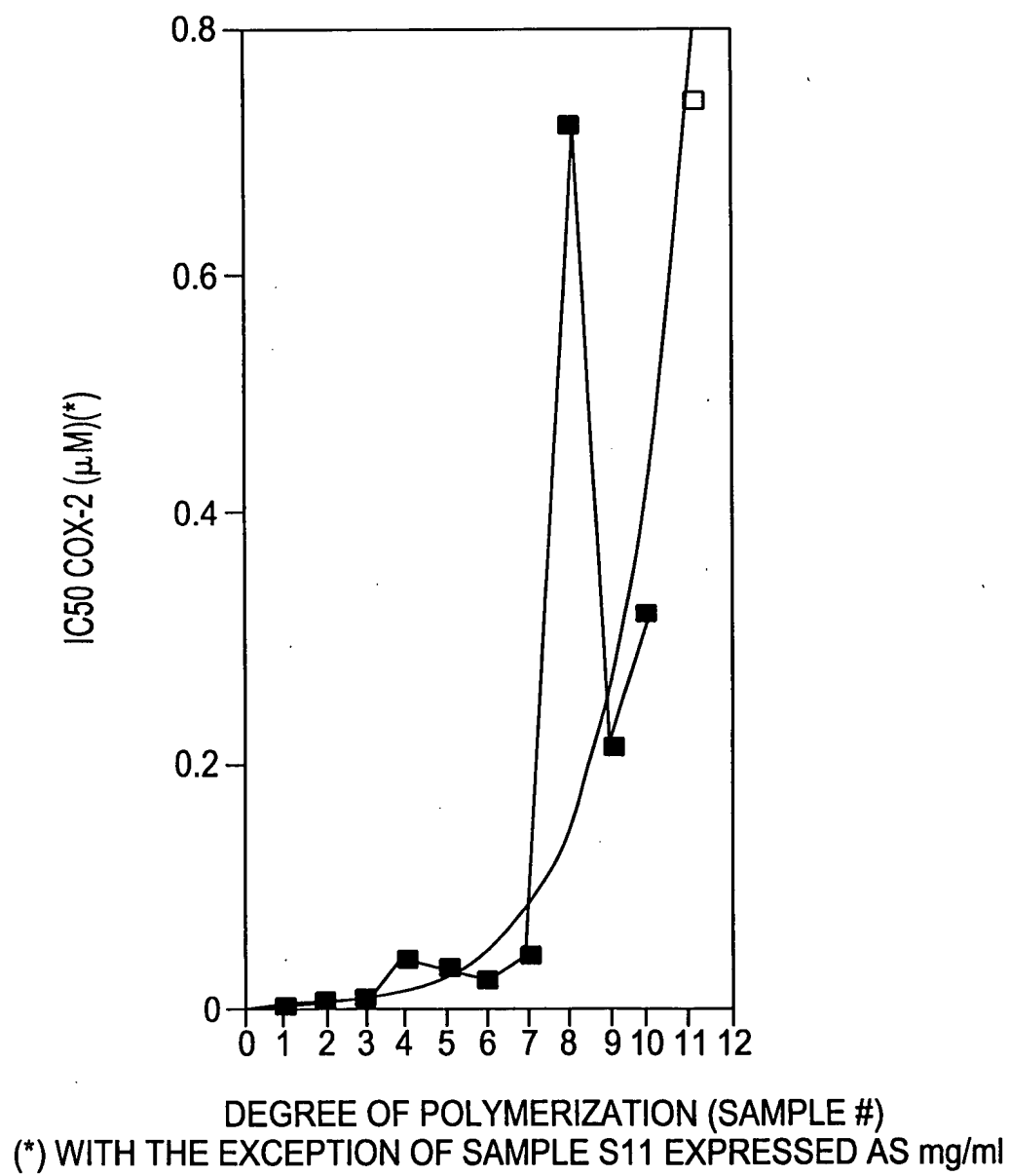
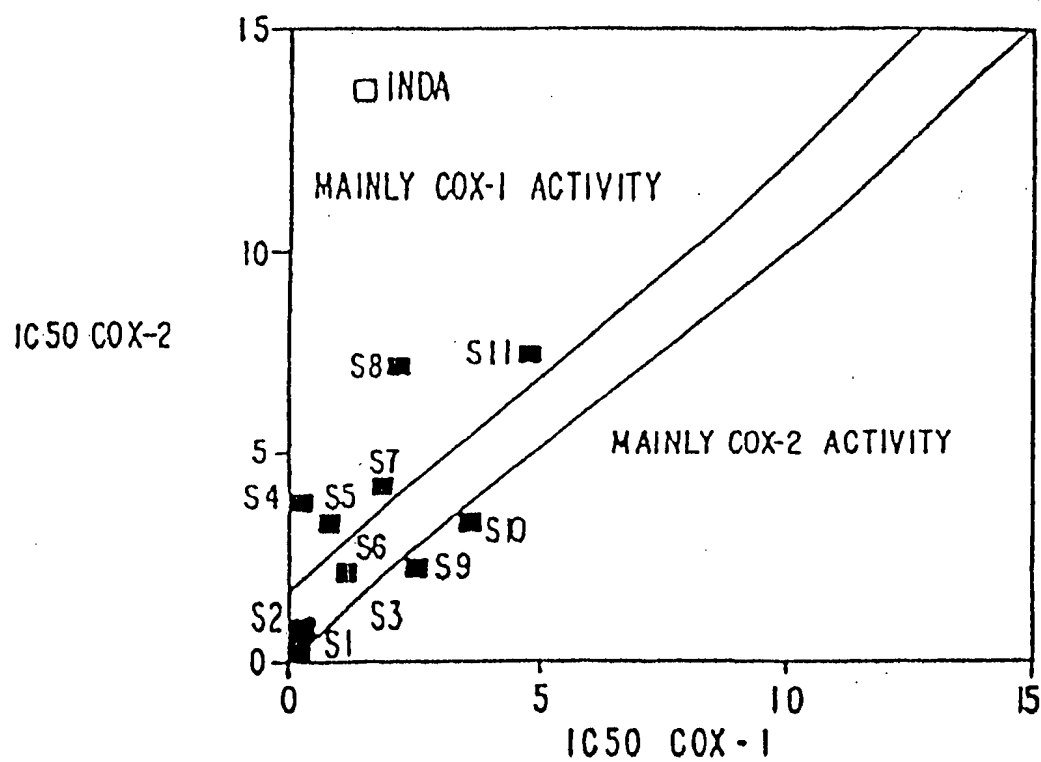


FIG. 17



(*) WITH THE EXEPTION OF SAMPLE S11

FIG. 18A

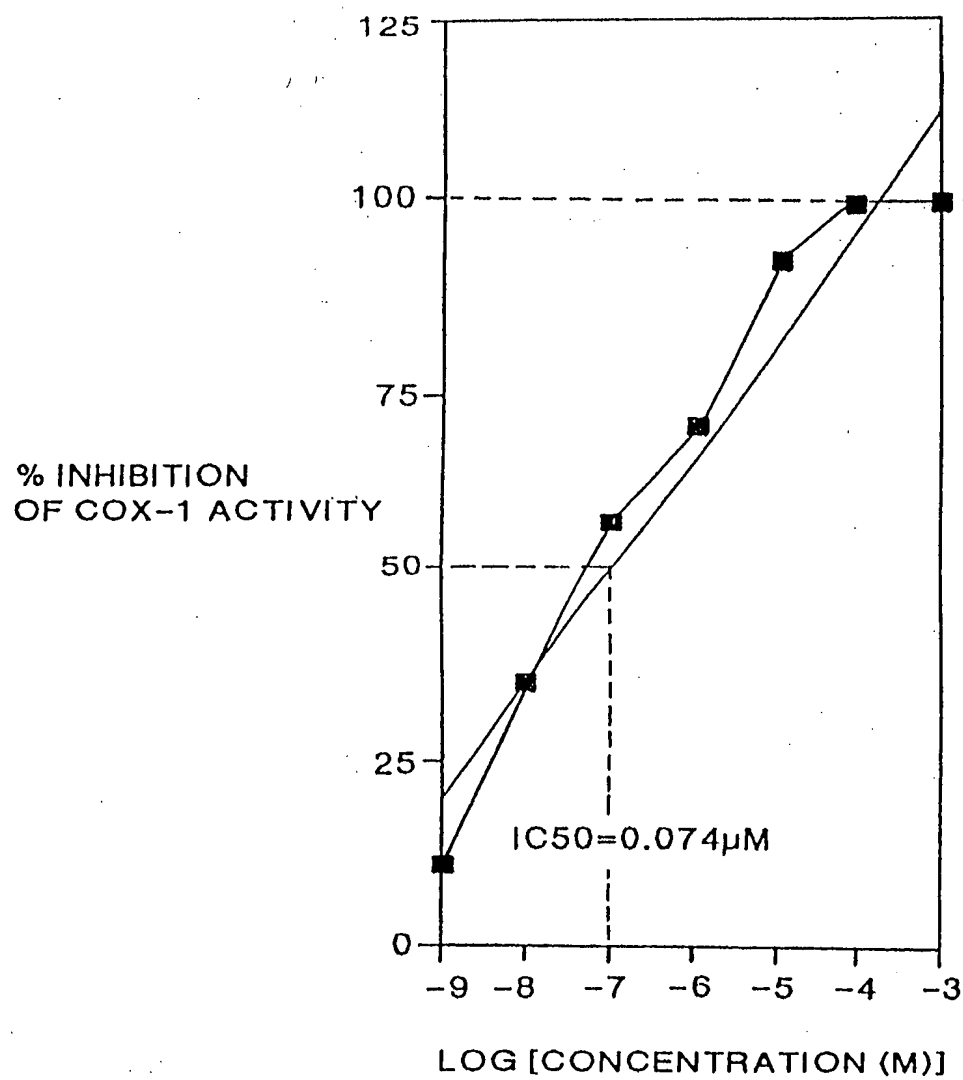
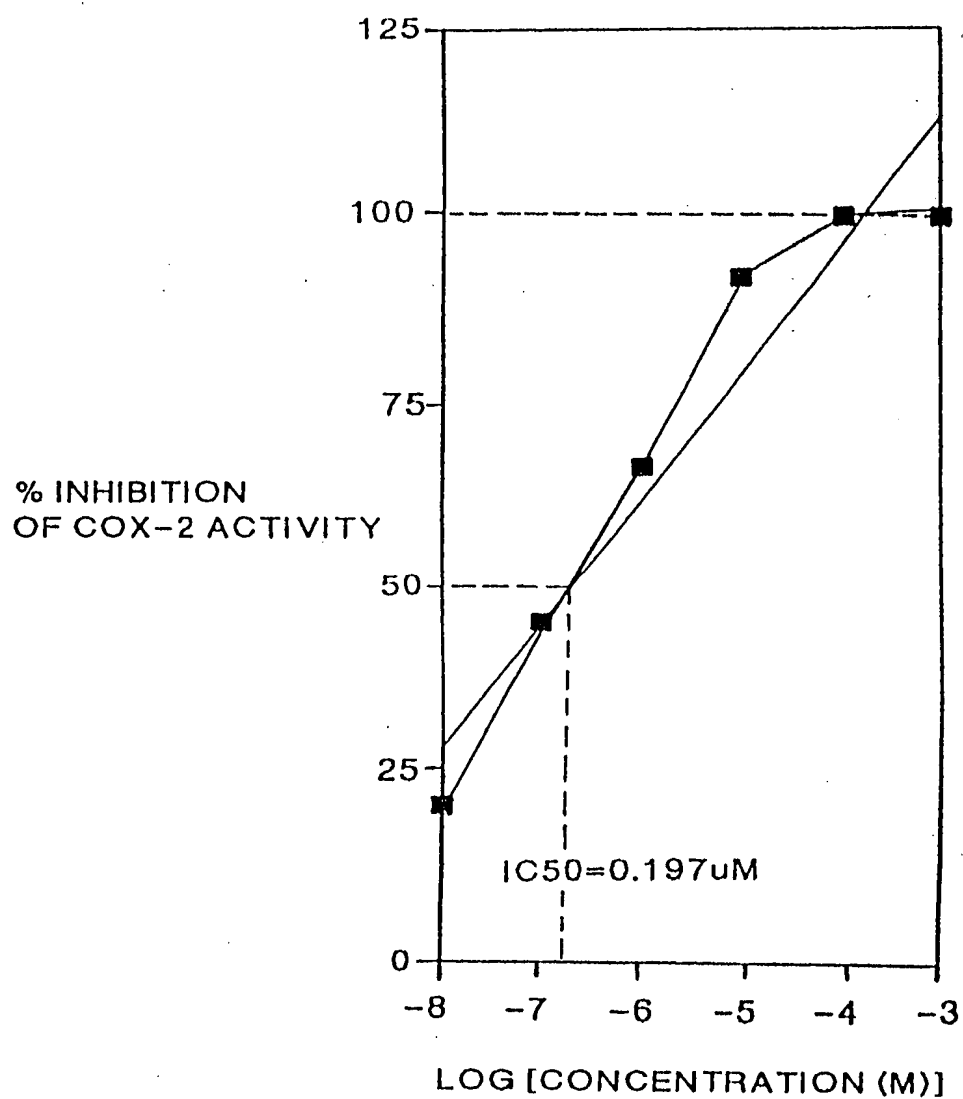
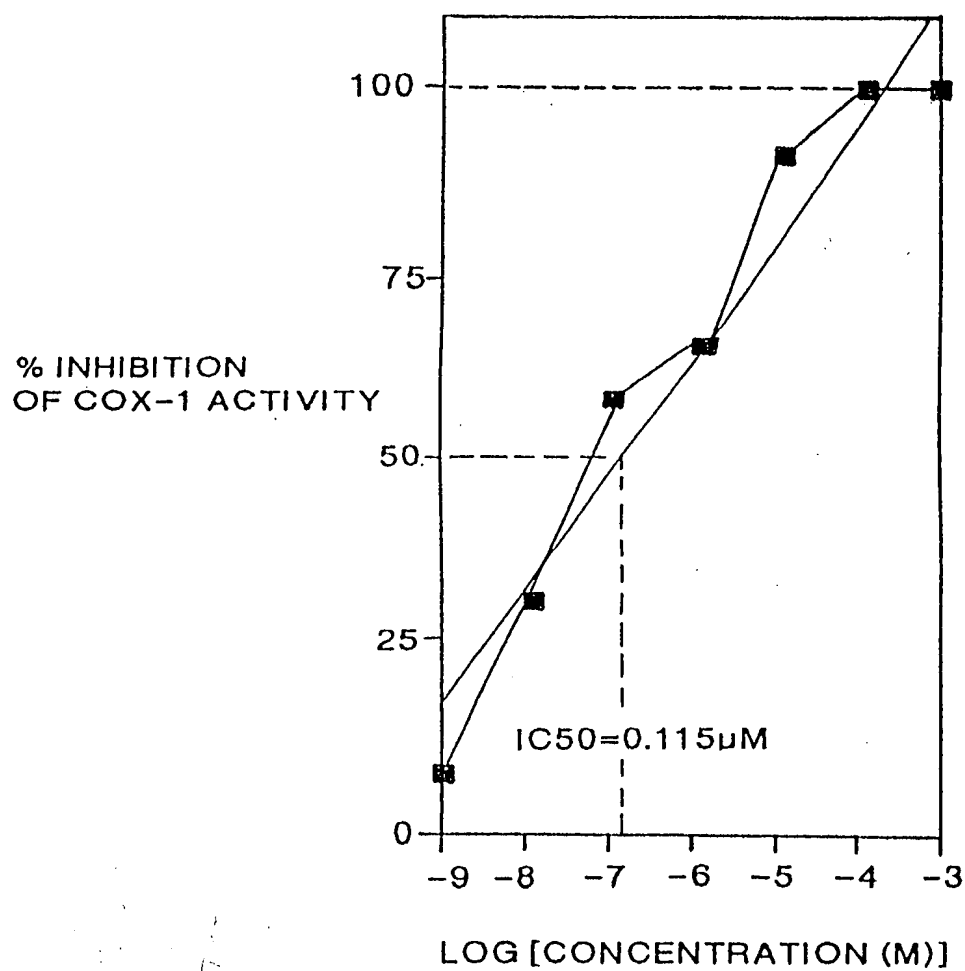


FIG. 18B



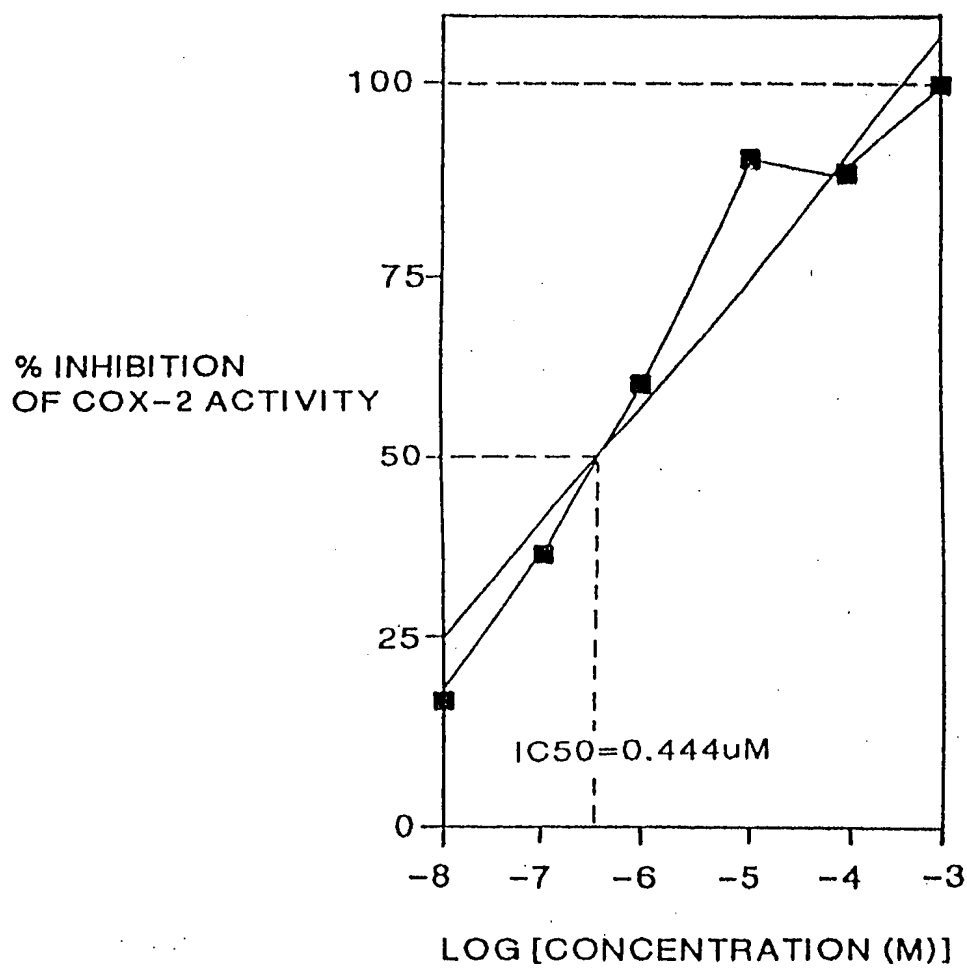
REPLACEMENT SHEET

FIG. 18C



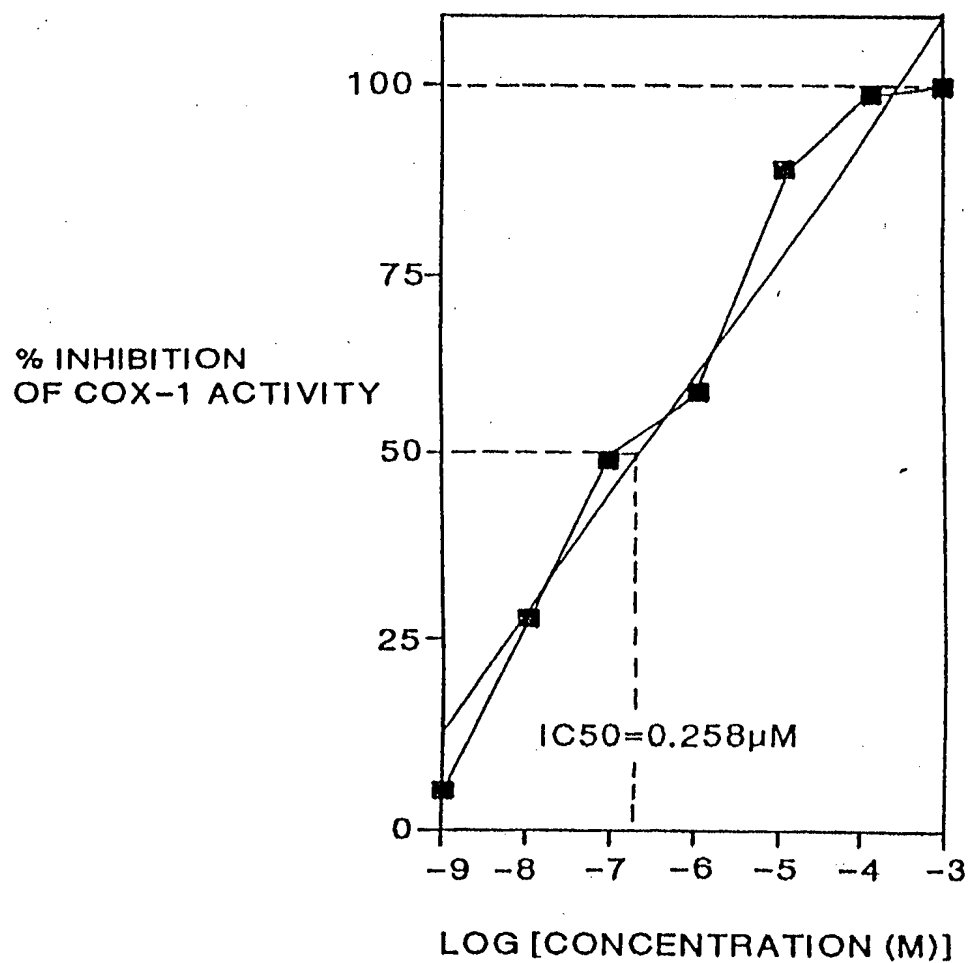
REPLACEMENT SHEET

FIG. 18D



REPLACEMENT SHEET

FIG. 18E



REPLACEMENT SHEET

FIG. 18F

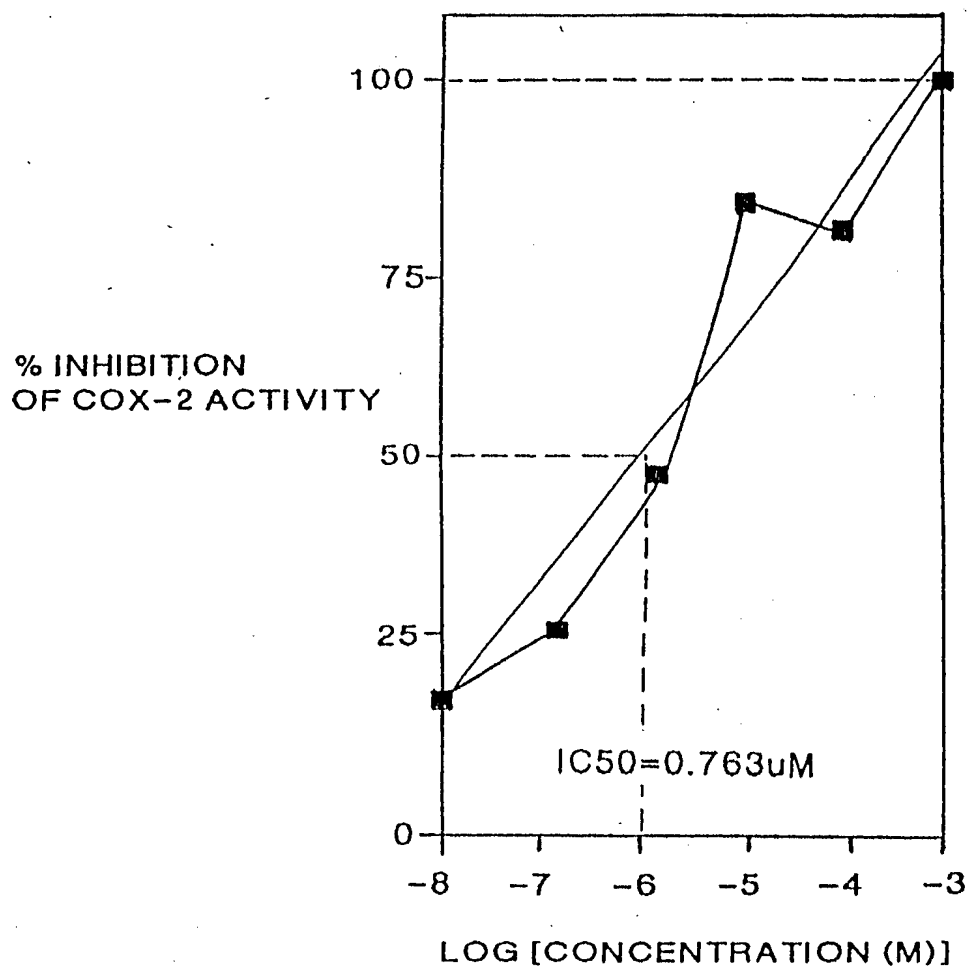
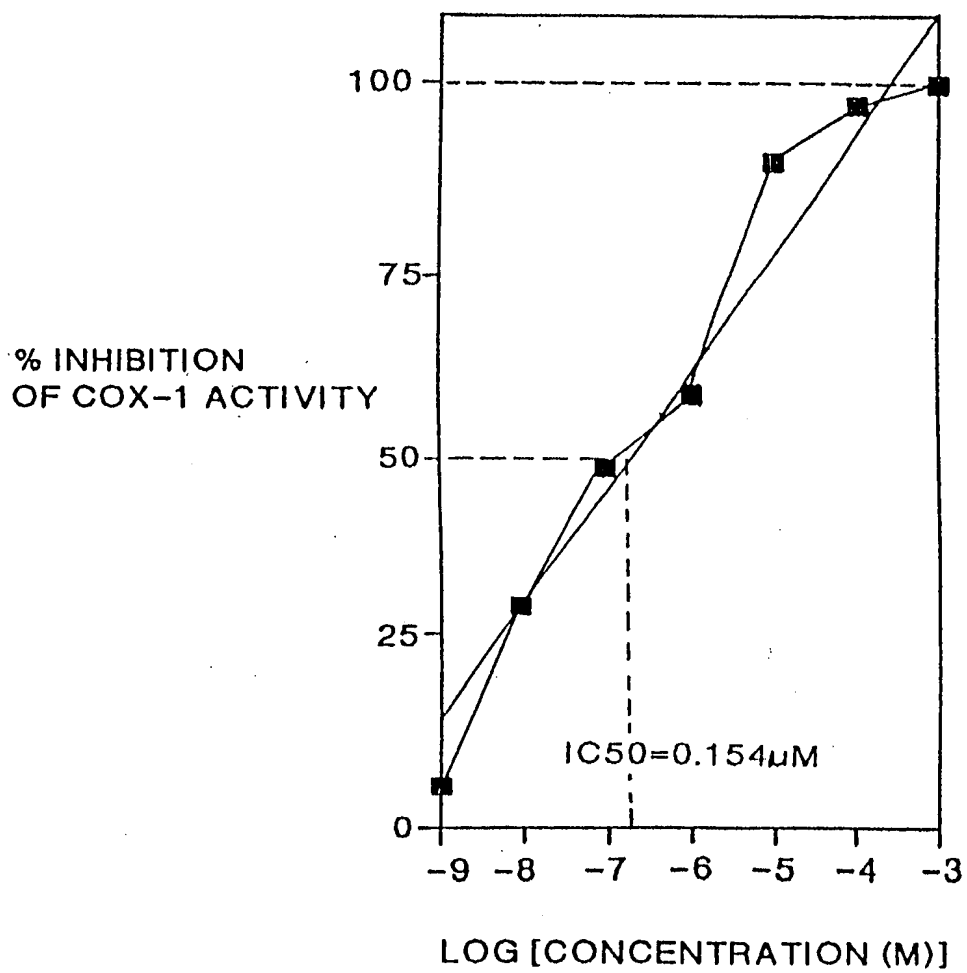


FIG. 18G



REPLACEMENT SHEET

FIG. 18H

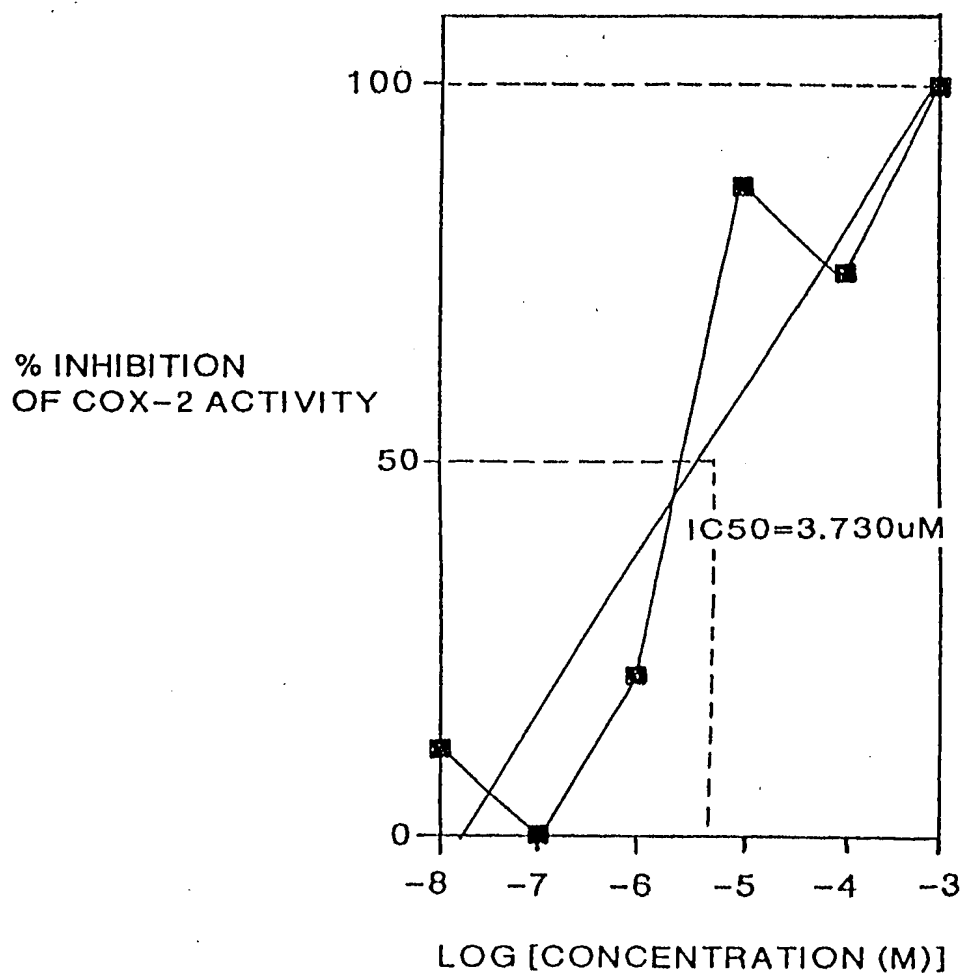
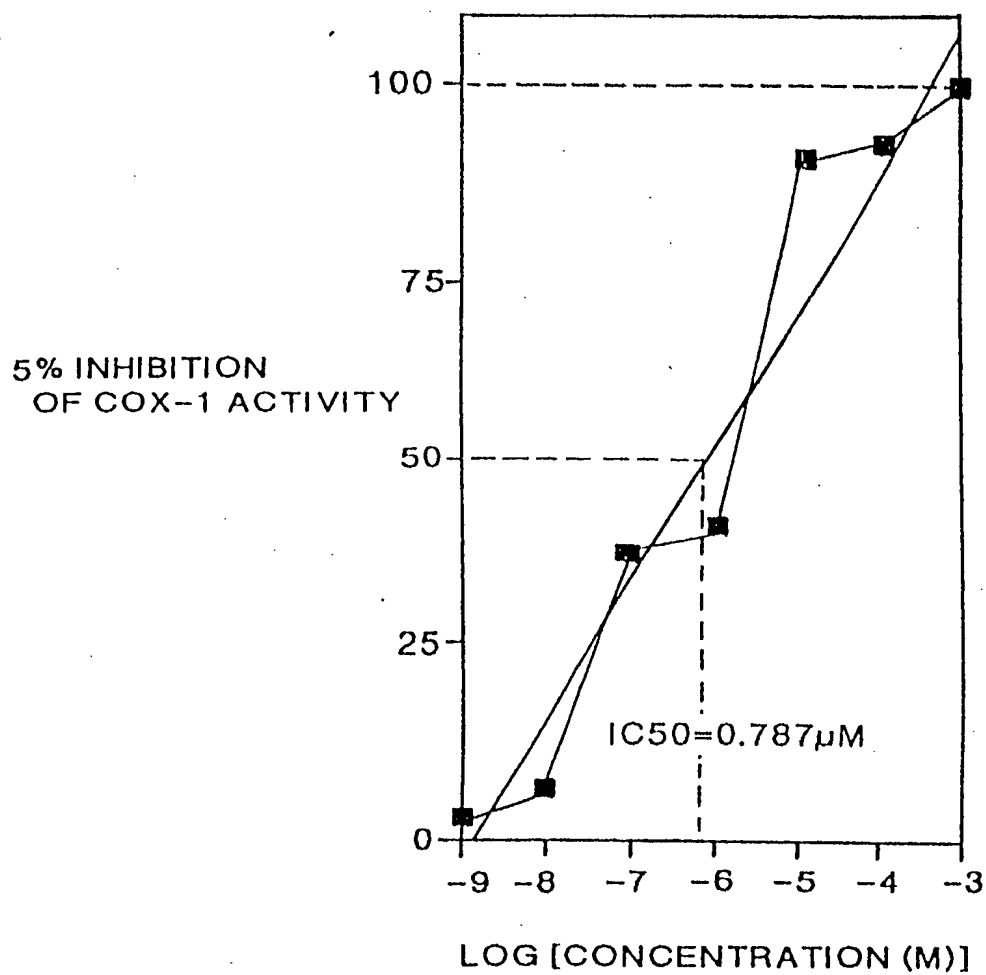
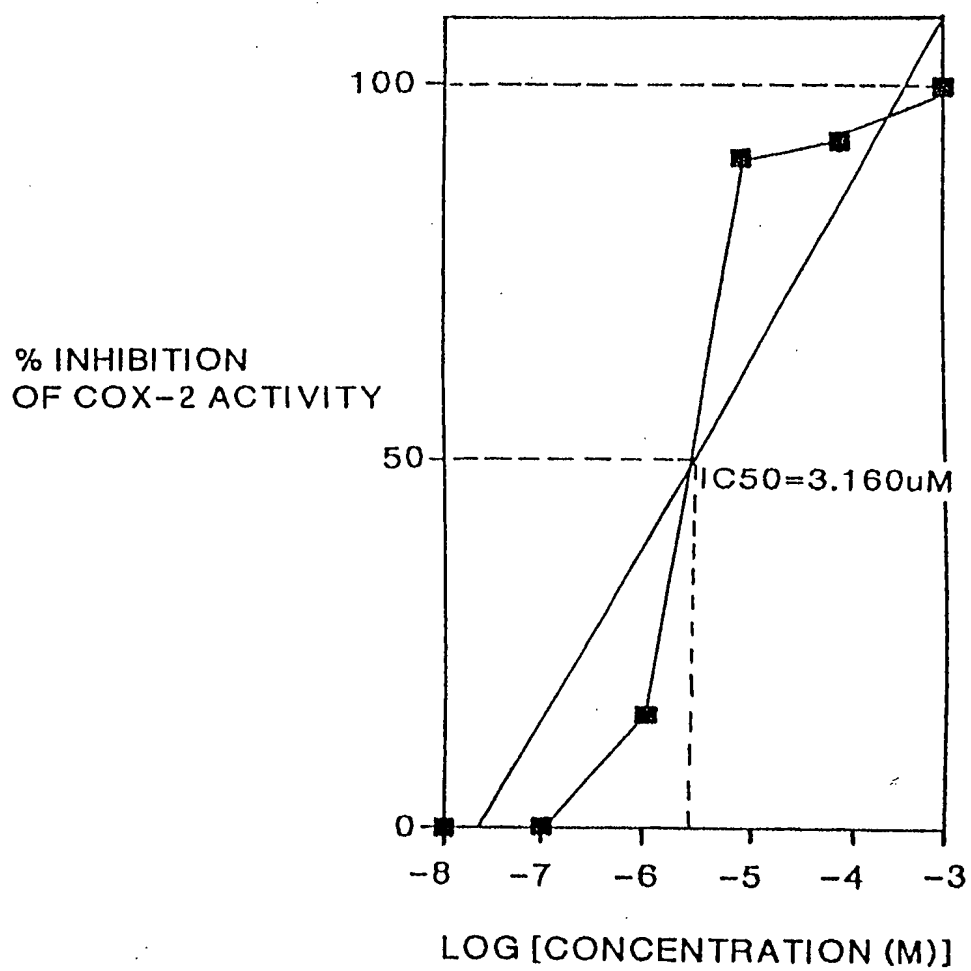


FIG. 18I



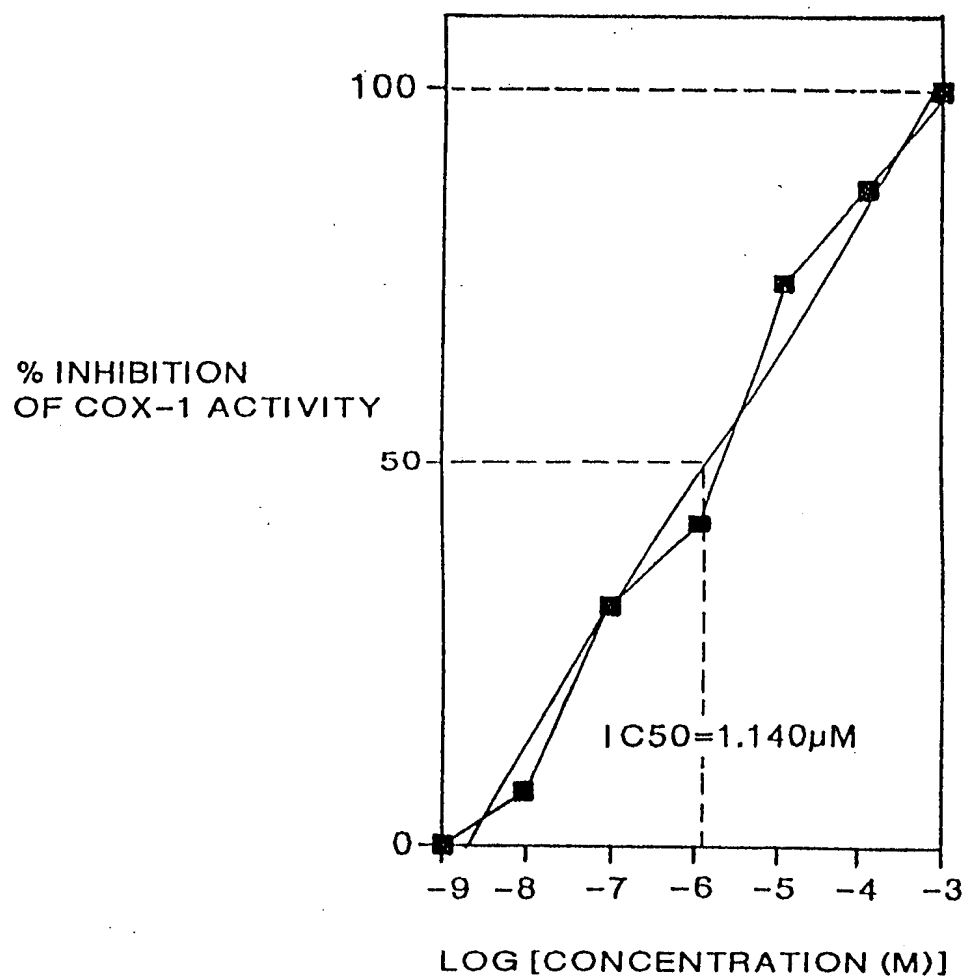
REPLACEMENT SHEET

FIG. 18J



REPLACEMENT SHEET

FIG. 18K



REPLACEMENT SHEET

FIG. 18L

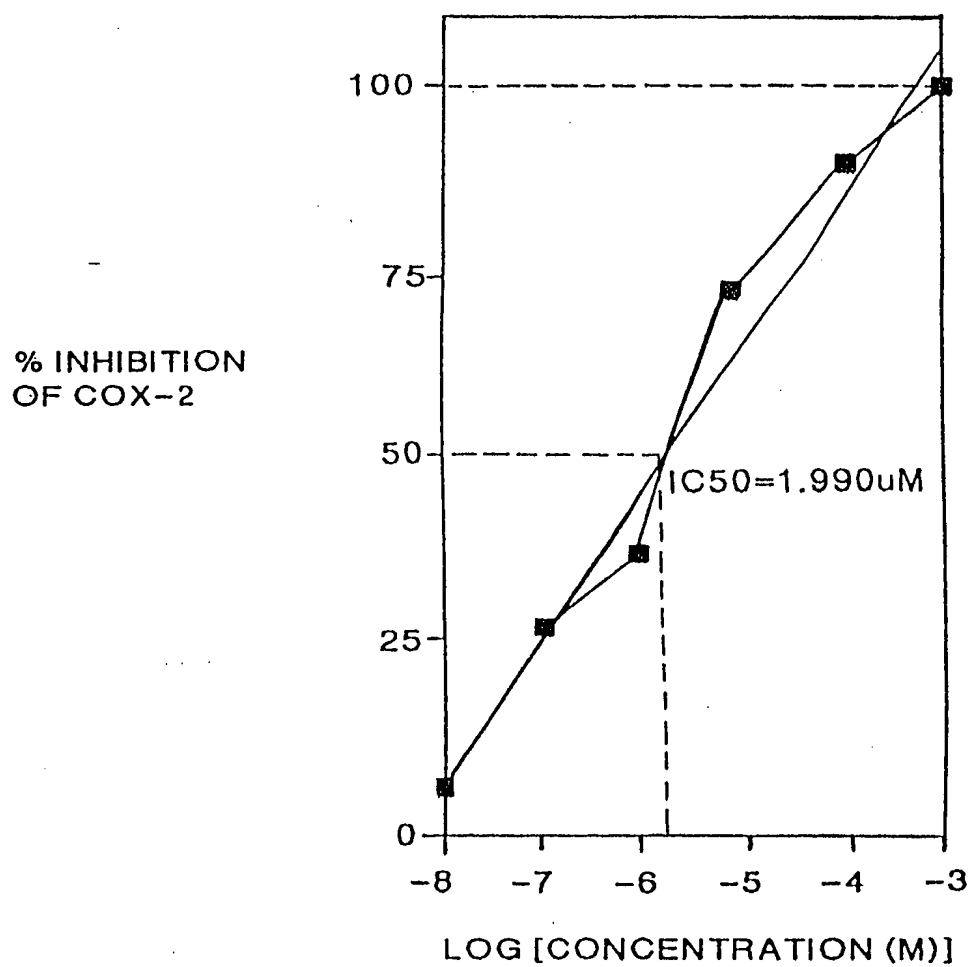


FIG. 18M

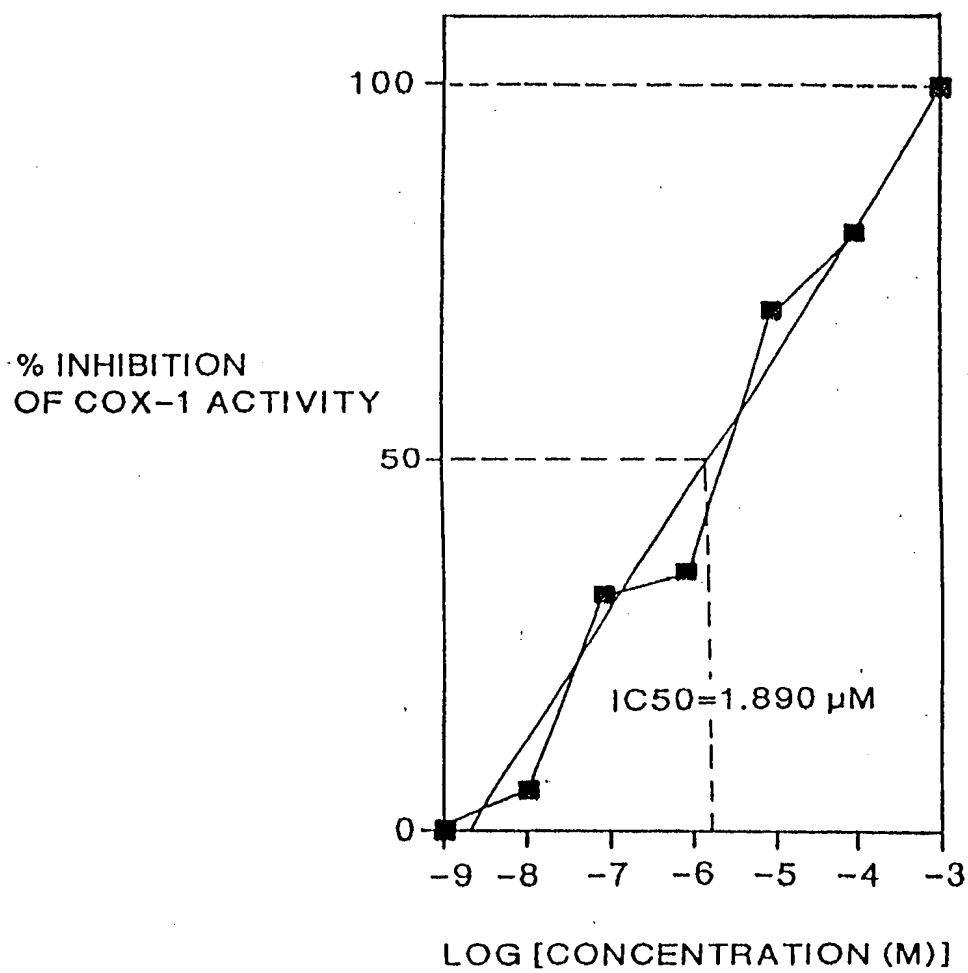


FIG. 18N

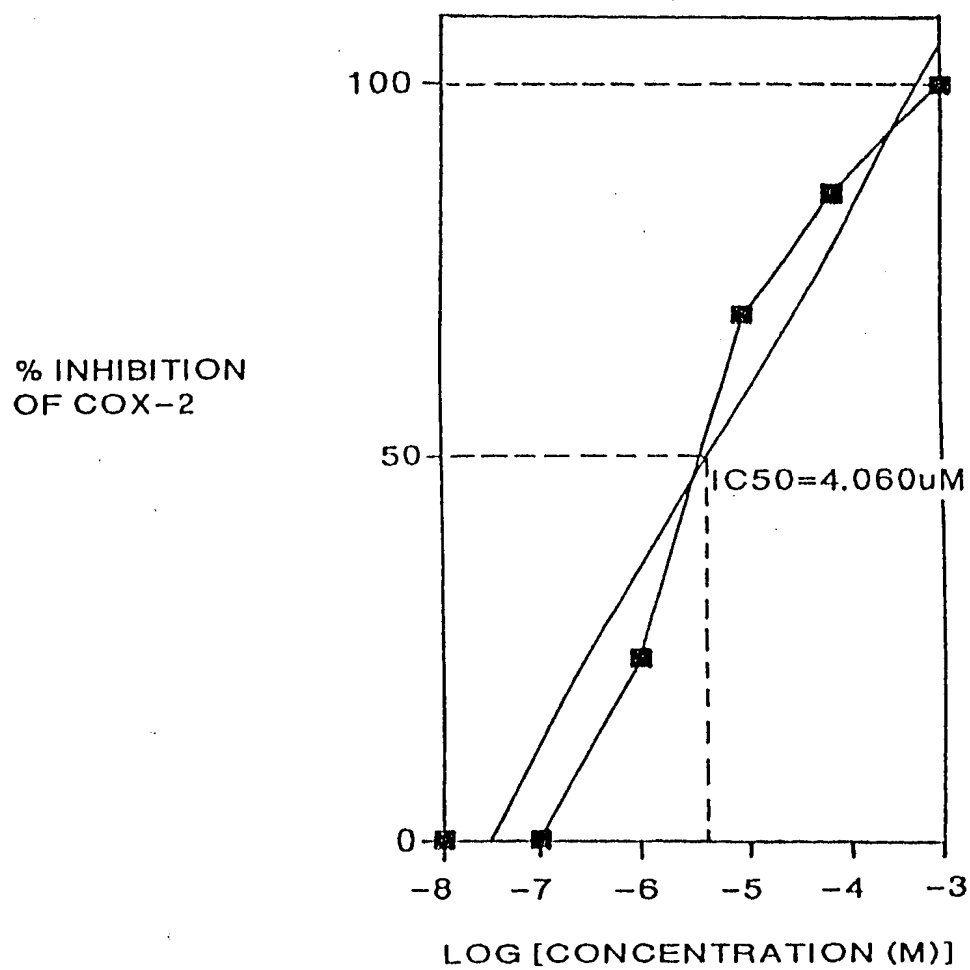
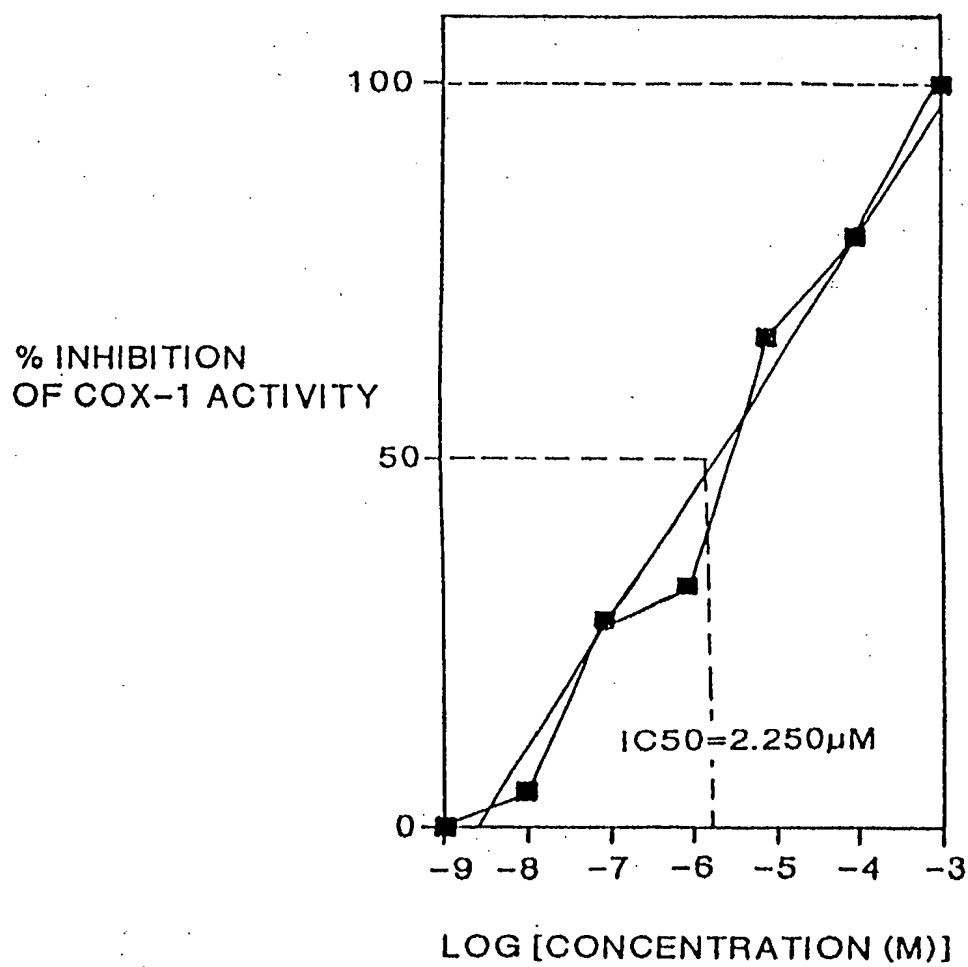


FIG. 180



REPLACEMENT SHEET

FIG. 18P

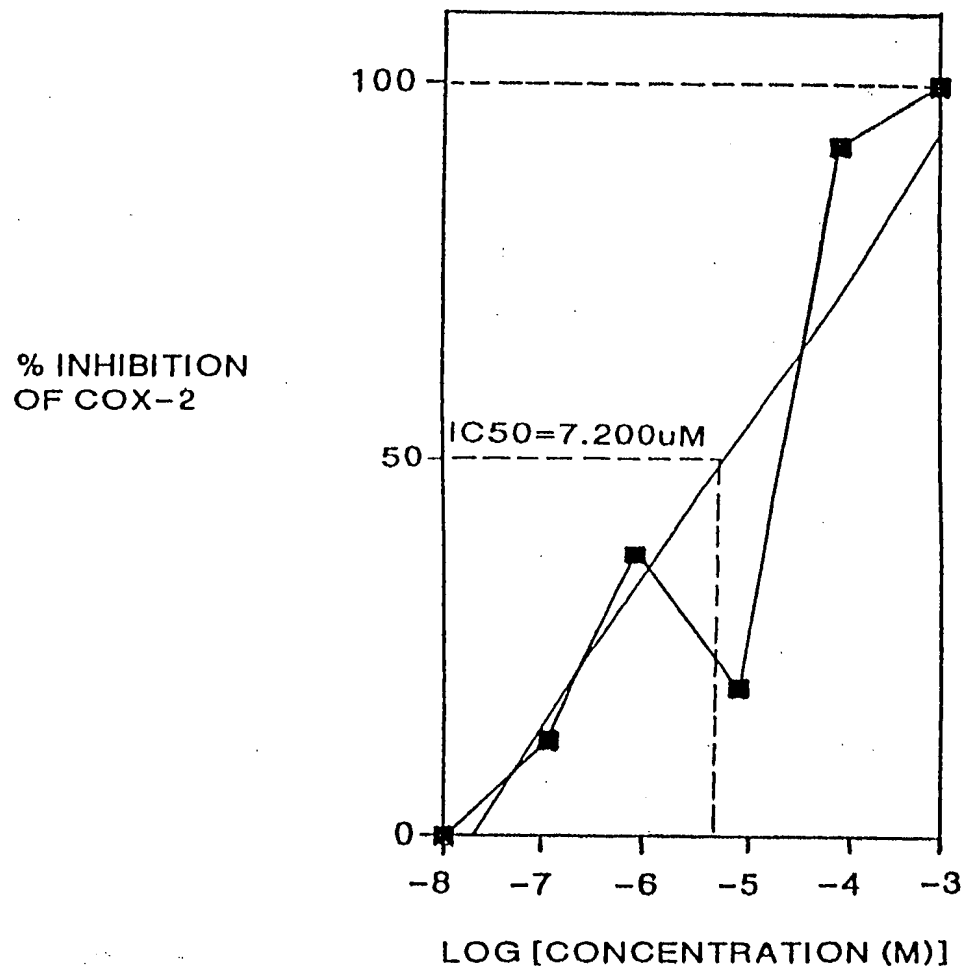


FIG. 18Q

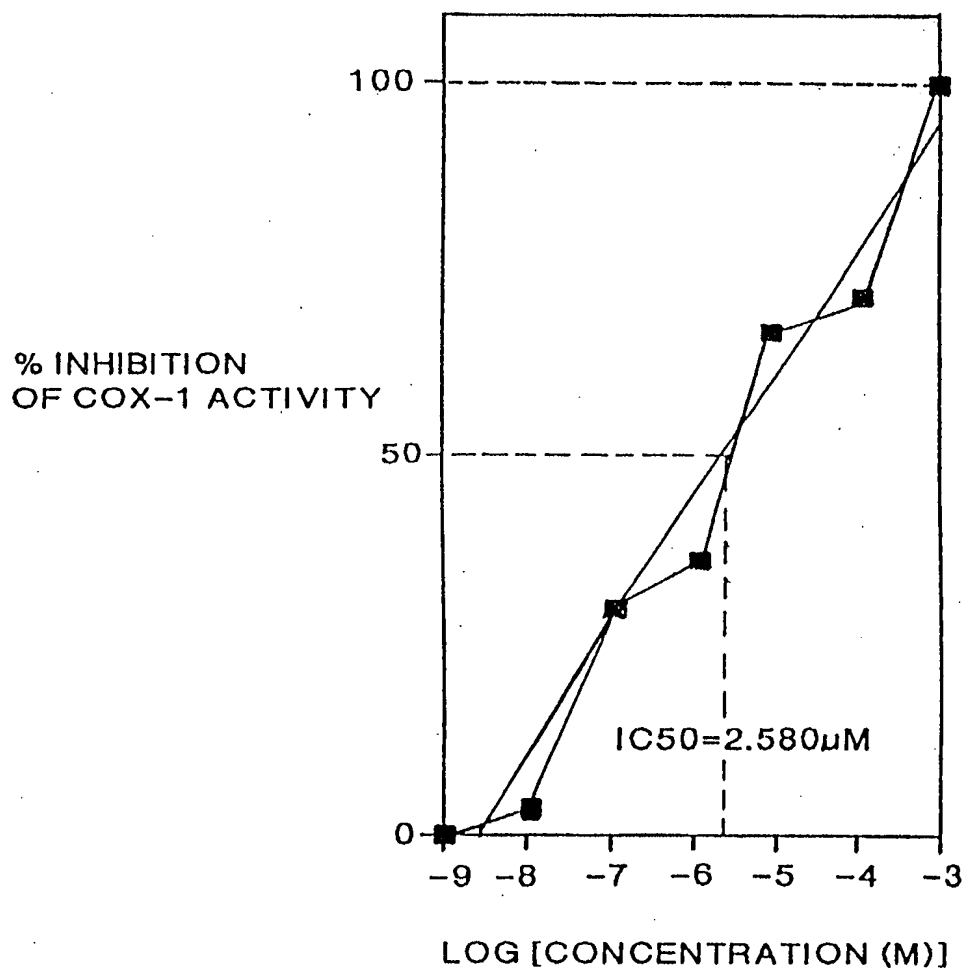
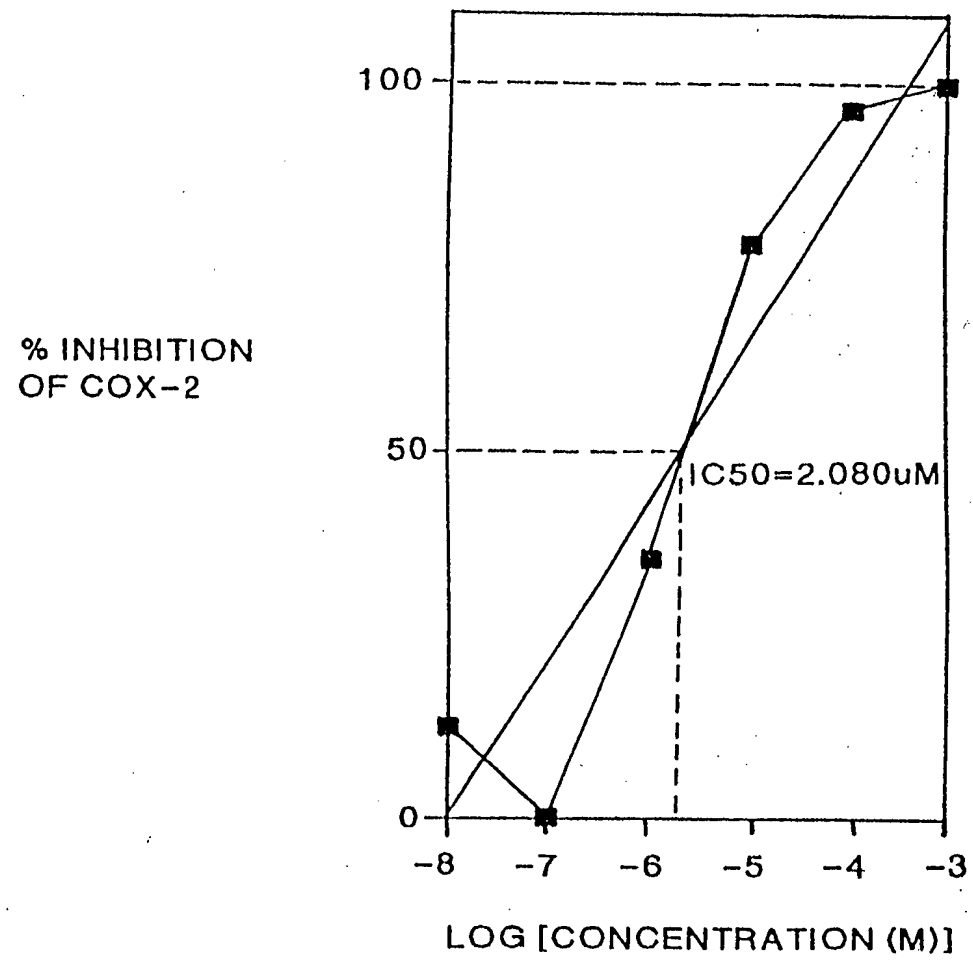
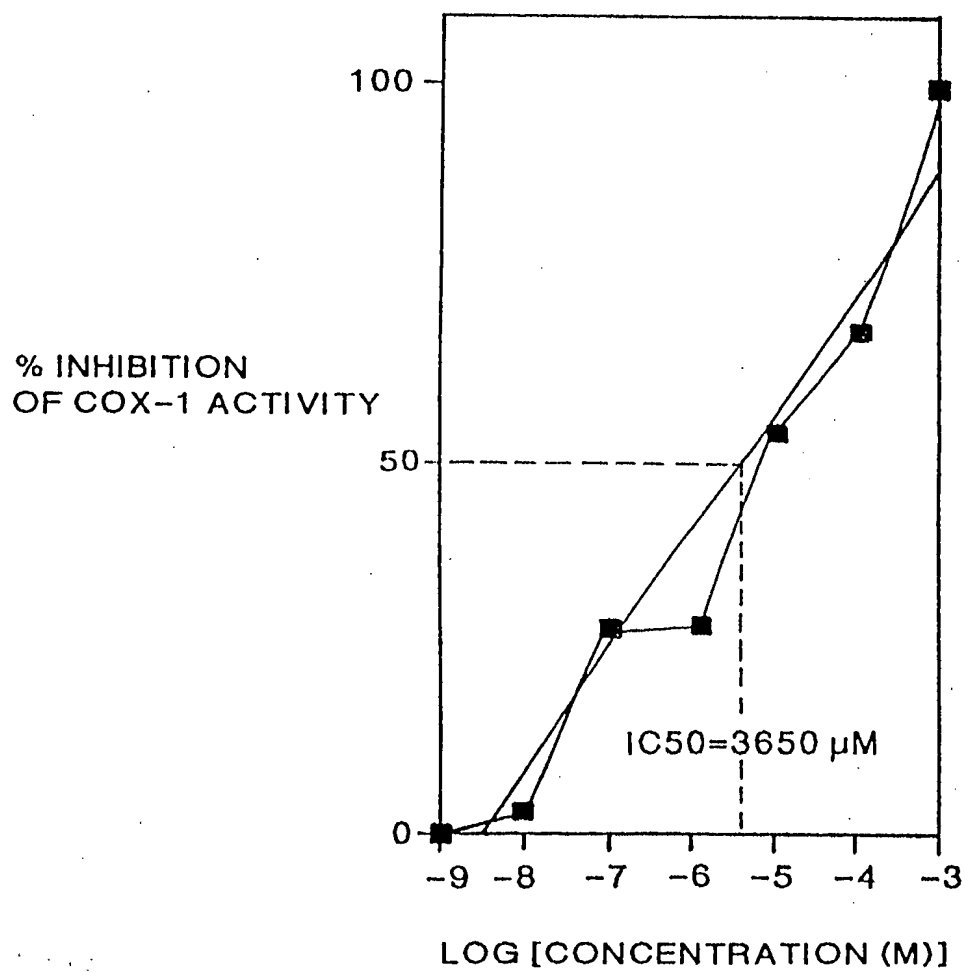


FIG. 18R



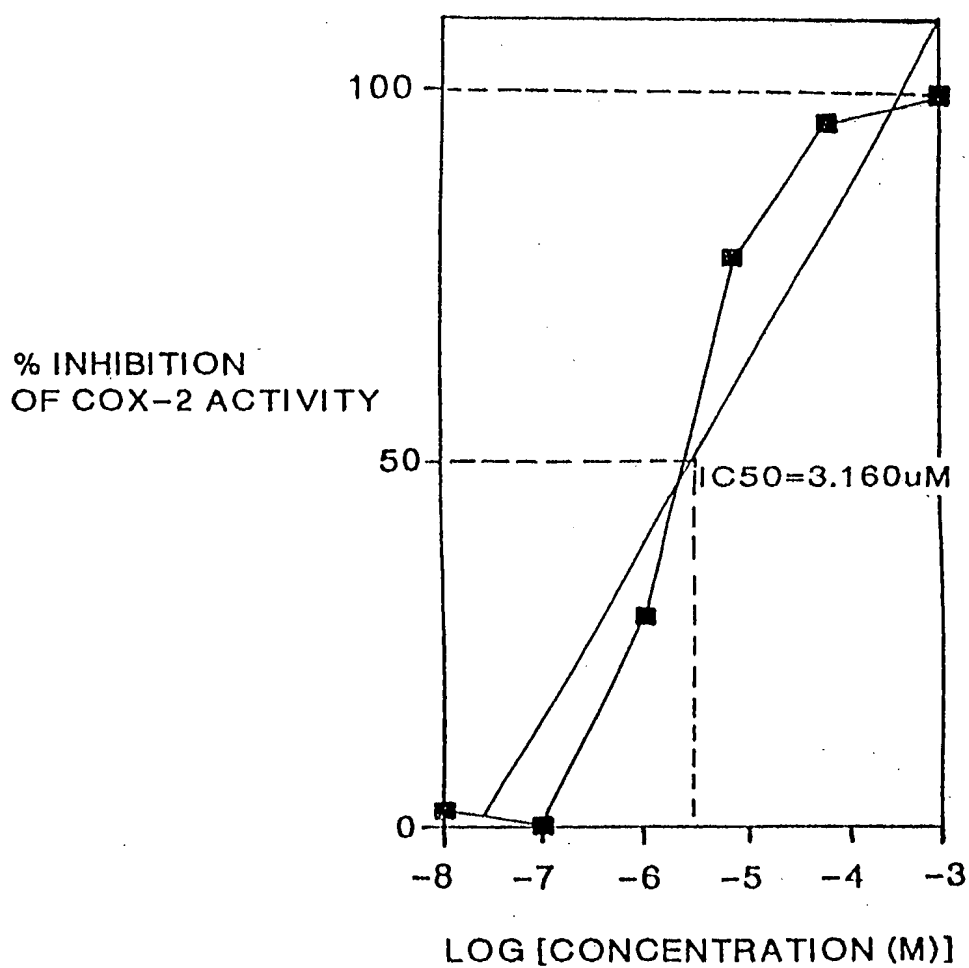
REPLACEMENT SHEET

FIG. 18S



REPLACEMENT SHEET

FIG. 18T



REPLACEMENT SHEET

FIG. 18U

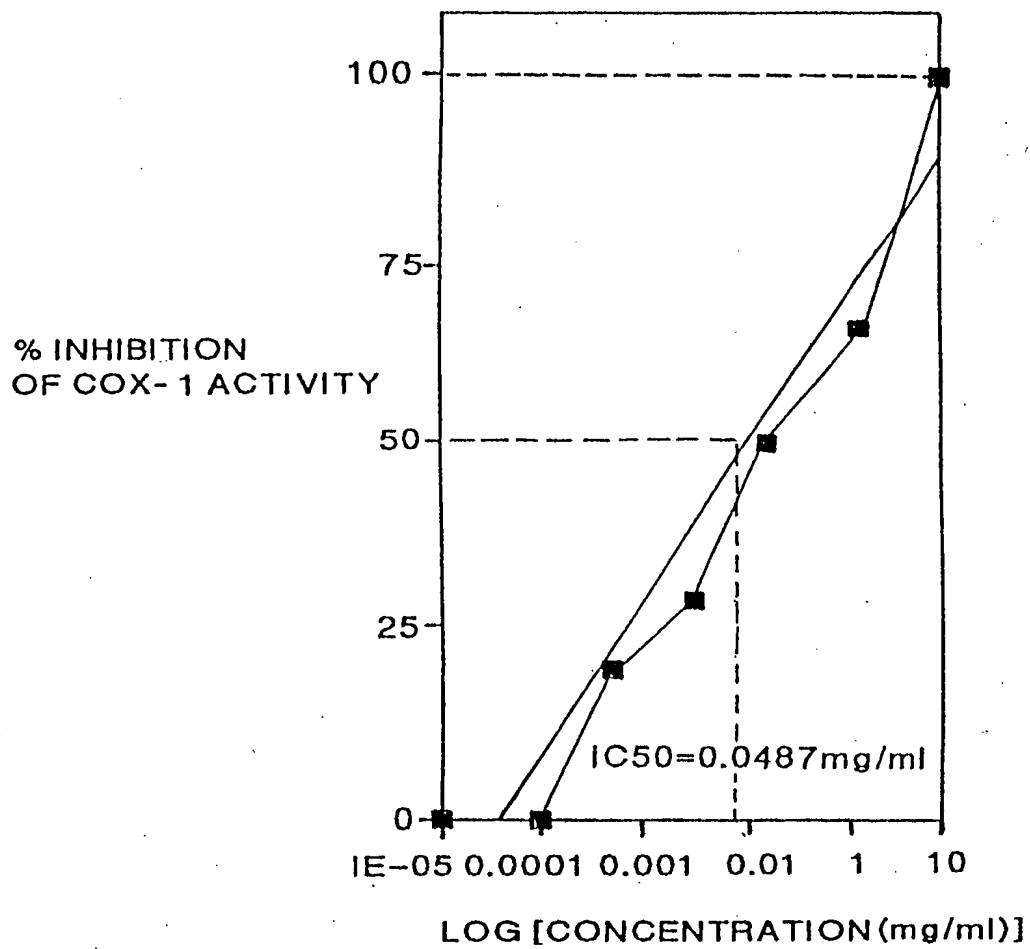


FIG. 18V

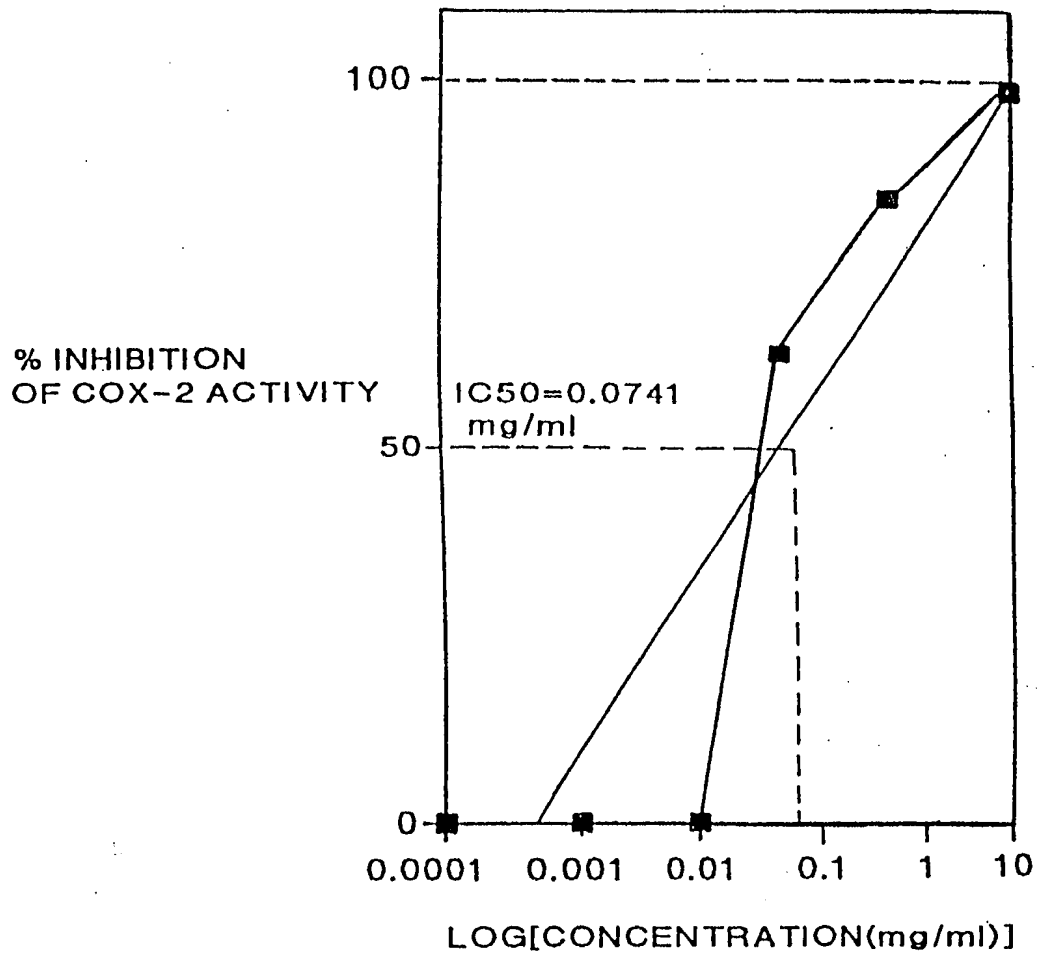


FIG. 19A

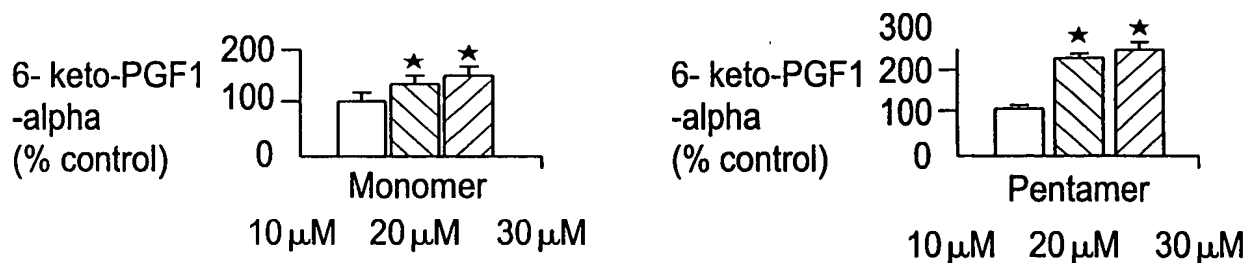


FIG. 19B

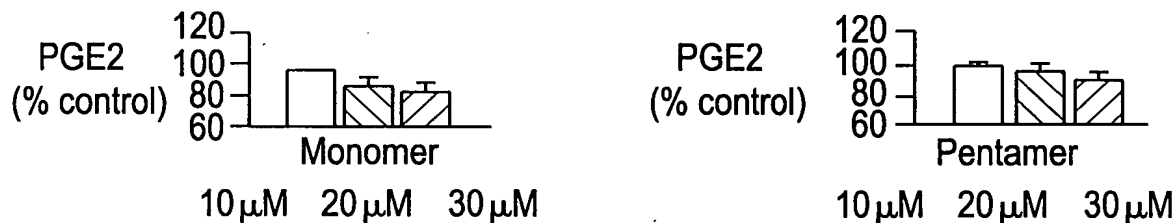


FIG. 19C

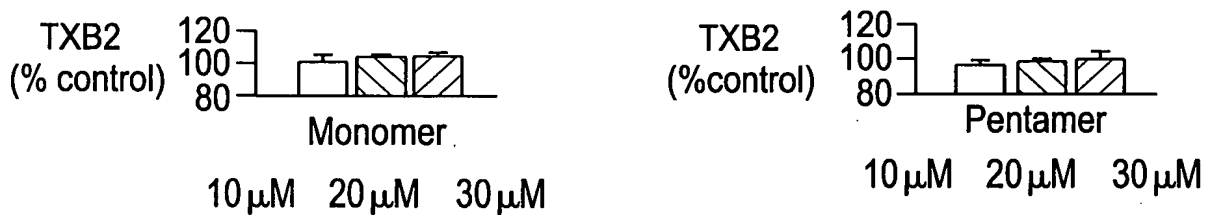


FIG. 19D

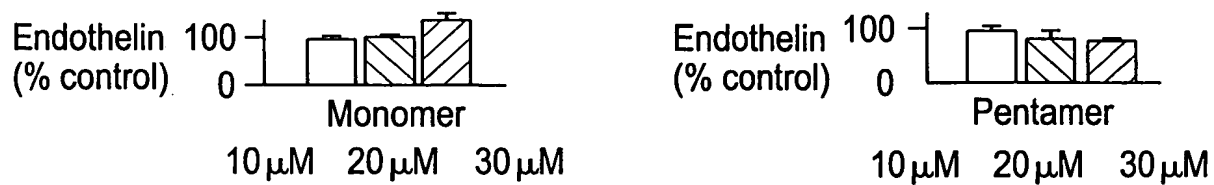


FIG. 20B

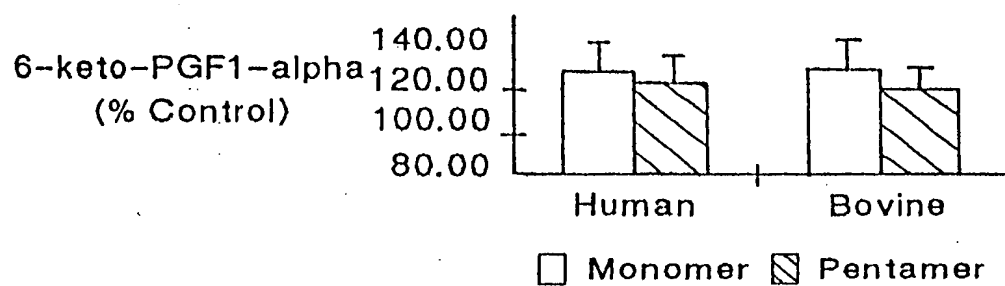


FIG. 20A

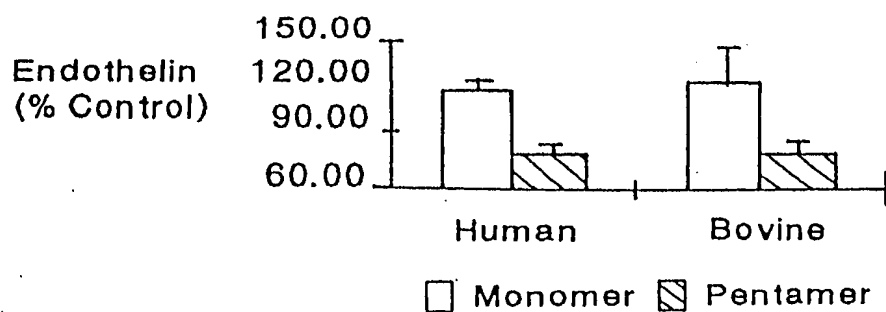


FIG. 21A

FIG. 21B

FIG. 21C

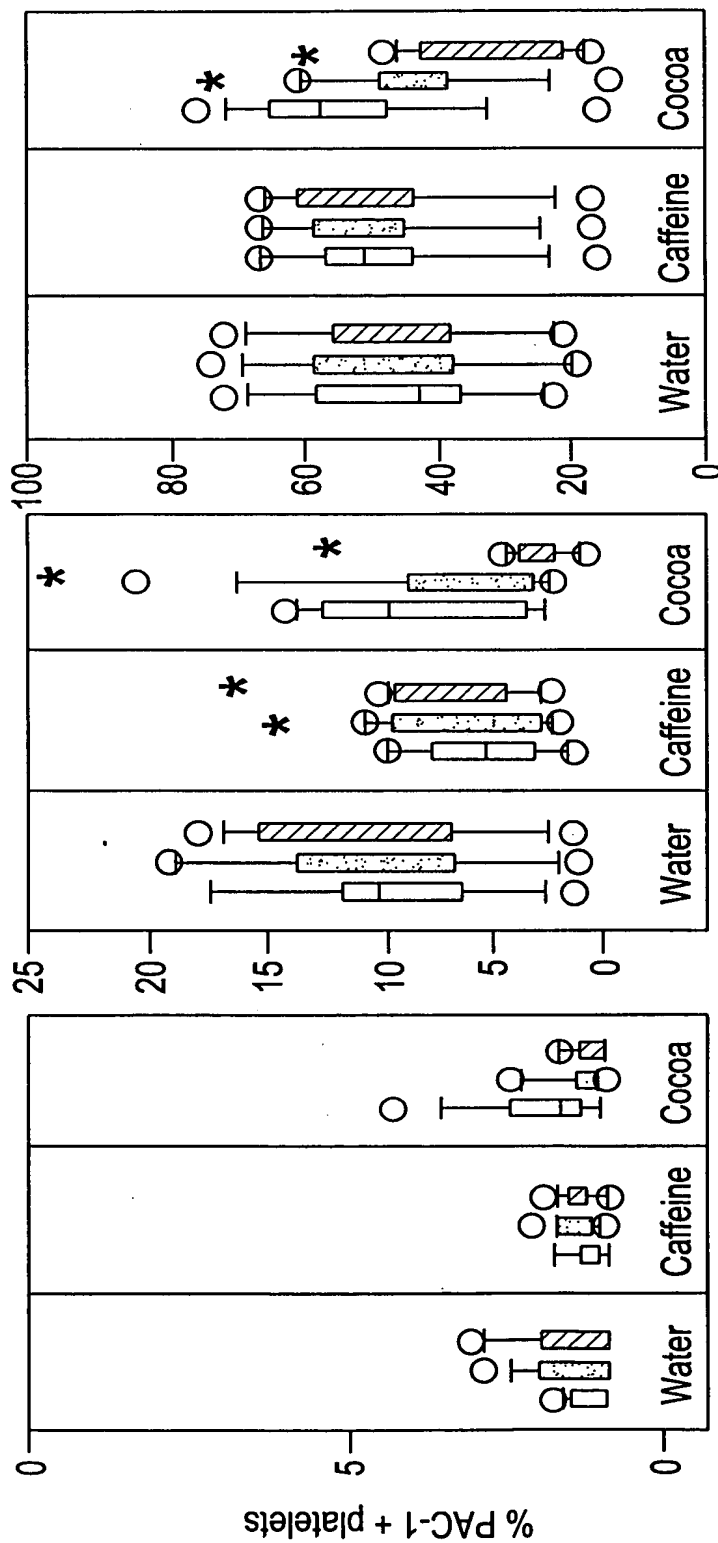


FIG. 22A

FIG. 22B

FIG. 22C

